

Table 1 Projection of Operating Cost/Benefit of Bangui City, Case 1 (On the Basis of Actual SOBECA's Balance Sheet in 1998 and Water Demand Projection Done by Master Plan Study)

Item	Unit	Result of SOBECA's Balance Sheet in 1998	Estimation of Cost/Benefit																	
			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
Mean Annual Water Supply Volume	m ³ /Year	7,812,269	7,391,433	7,409,865	7,428,298	7,446,730	7,465,163	7,483,596	7,502,028	7,520,461	7,538,894	7,557,327	7,575,760	7,594,193	7,612,626	7,631,059	7,649,492	7,667,925	7,686,358	7,704,791
Billing Water Volume	m ³ /Year	8,940,200																		
Accounted-for Water Volume per Annum	m ³ /Year	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001	5,312,001
Accounted-for Water as Percent of Total of Bangui City	%	57.0%	57.7%	58.5%	59.2%	59.9%	60.6%	61.4%	62.1%	62.8%	63.5%	64.3%	65.0%	65.7%	66.4%	67.1%	67.8%	68.5%	69.2%	70.0%
Total Billing for all the cities	k.FCPA	1,409,774	1,431,275	1,452,776	1,474,277	1,495,778	1,517,279	1,538,780	1,560,281	1,581,782	1,603,283	1,624,784	1,646,285	1,667,786	1,689,287	1,710,788	1,732,289	1,753,790	1,775,291	1,796,792
Utilization Charge of Facilities	k.FCPA	197,268	200,379	203,490	206,601	209,712	212,823	215,934	219,045	222,156	225,267	228,378	231,489	234,600	237,711	240,822	243,933	247,044	250,155	253,266
1. Operating Revenue																				
Water Sales Rev.	k.FCPA	1,212,406	1,230,897	1,249,388	1,267,879	1,286,370	1,304,861	1,323,352	1,341,843	1,360,334	1,378,825	1,397,316	1,415,807	1,434,298	1,452,789	1,471,280	1,489,771	1,508,262	1,526,753	1,545,244
Meter Lease Charge	k.FCPA	320,929	325,824	330,719	335,614	340,509	345,404	350,299	355,194	360,089	364,984	369,879	374,774	379,669	384,564	389,459	394,354	399,249	404,144	409,039
Others	k.FCPA	16,951	17,209	17,467	17,725	17,983	18,241	18,499	18,757	19,015	19,273	19,531	19,789	20,047	20,305	20,563	20,821	21,079	21,337	21,595
Sub-total (A)	k.FCPA	1,550,286	1,573,930	1,597,574	1,621,218	1,644,862	1,668,506	1,692,150	1,715,794	1,739,438	1,763,082	1,786,726	1,810,370	1,834,014	1,857,658	1,881,302	1,904,946	1,928,590	1,952,234	1,975,878
2. Non-operating Revenue																				
Interest Income	k.FCPA	7,328	7,439	7,550	7,661	7,772	7,883	7,994	8,105	8,216	8,327	8,438	8,549	8,660	8,771	8,882	8,993	9,104	9,215	9,326
Miscellaneous Income	k.FCPA	21,844	22,177	22,510	22,843	23,176	23,509	23,842	24,175	24,508	24,841	25,174	25,507	25,840	26,173	26,506	26,839	27,172	27,505	27,838
Sub-total (B)	k.FCPA	29,172	29,616	30,060	30,504	30,948	31,392	31,836	32,280	32,724	33,168	33,612	34,056	34,500	34,944	35,388	35,832	36,276	36,720	37,164
Total (C) = (A) + (B)	k.FCPA	1,579,458	1,603,546	1,627,632	1,651,718	1,675,804	1,700,890	1,725,976	1,751,062	1,776,148	1,801,234	1,826,320	1,851,406	1,876,492	1,901,578	1,926,664	1,951,750	1,976,836	2,001,922	2,027,008
1. Operating Expenditure																				
Personnel Exp.	k.FCPA	524,000	534,000	544,000	554,000	564,000	574,000	584,000	594,000	604,000	614,000	624,000	634,000	644,000	654,000	664,000	674,000	684,000	694,000	704,000
Cost of Chemicals	k.FCPA	152,601	152,982	153,364	153,745	154,127	154,508	154,889	155,271	155,652	156,033	156,414	156,795	157,176	157,557	157,938	158,319	158,700	159,081	159,462
Cost of Electricity	k.FCPA	117,978	118,273	118,567	118,862	119,157	119,452	119,747	120,042	120,337	120,632	120,927	121,222	121,517	121,812	122,107	122,402	122,697	122,992	123,287
Fuel, Oil	k.FCPA	289,459	290,057	290,655	291,253	291,851	292,449	293,047	293,645	294,243	294,841	295,439	296,037	296,635	297,233	297,831	298,429	299,027	299,625	300,223
Furniture & Tools	k.FCPA	64,003	64,163	64,323	64,483	64,643	64,803	64,963	65,123	65,283	65,443	65,603	65,763	65,923	66,083	66,243	66,403	66,563	66,723	66,883
Transportation	k.FCPA	28,173	28,243	28,314	28,384	28,455	28,525	28,595	28,666	28,736	28,806	28,876	28,946	29,016	29,086	29,156	29,226	29,296	29,366	29,436
Repair	k.FCPA	33,480	33,564	33,647	33,731	33,815	33,899	33,982	34,066	34,149	34,233	34,316	34,400	34,483	34,567	34,650	34,734	34,817	34,901	34,984
Communication	k.FCPA	35,457	35,546	35,635	35,723	35,812	35,901	35,990	36,079	36,168	36,257	36,346	36,435	36,524	36,613	36,702	36,791	36,880	36,969	37,058
Lease & Commission	k.FCPA	237,989	238,584	239,179	239,774	240,369	240,964	241,559	242,154	242,749	243,344	243,939	244,534	245,129	245,724	246,319	246,914	247,509	248,104	248,699
Others	k.FCPA	60,607	60,759	60,911	61,063	61,215	61,367	61,519	61,671	61,823	61,975	62,127	62,279	62,431	62,583	62,735	62,887	63,039	63,191	63,343
Depreciation	k.FCPA	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000
Sub-total (D)	k.FCPA	1,677,747	1,680,171	1,682,595	1,685,019	1,687,443	1,689,867	1,692,291	1,694,715	1,697,139	1,699,563	1,701,987	1,704,411	1,706,835	1,709,259	1,711,683	1,714,107	1,716,531	1,718,955	1,721,379
2. Non-operation Expenditure																				
Interest Expenditure	k.FCPA	111,243																		
Taxes & Regulations	k.FCPA	82,488																		
Sub-total (E)	k.FCPA	193,731																		
Total (F) = (D) + (E)	k.FCPA	2,078,223																		
Operating Profit/Loss (G) = (C) - (F)	k.FCPA	-502,765																		
Revenue before deduction of Utilization Fee of Facilities	k.FCPA	2,245,635																		
Unit Cost of Water Supply (FCPA/m ³)		391	437	491	426	420	414	409	404	399	394	389	385	380	375	370	365	360	355	350
Unit Sales Price of Water Supply (FCPA/m ³)		423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423

Table 2 Projection of Operating Cost/Benefit of Bangui City, Case 2
(On the Basis of Actual SOCECA's Balance Sheet in 1998 and Water Demand Projection of Present Water Supply Area but Except Zone B1, B2, B3)

Item	Unit	Estimation of Cost/Benefit												
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Mean Annual Water Supply Volume	m ³ /year	7,373,000	7,391,438	7,409,865	7,428,298	7,446,730	7,465,163	7,470,289	7,444,175	7,897,724	8,351,273	8,804,822	9,297,353	9,849,890
Billing Water Volume	m ³ /year													
Accounted-for Water Volume per Annum	m ³ /year	4,202,610	4,266,704	4,331,066	4,395,695	4,460,591	4,525,755	4,521,672	4,620,972	4,959,771	5,305,146	5,657,098	6,040,955	6,471,378
Accounted for Water as Percent of Total of Bangui City	%	57.0%	57.7%	58.5%	59.2%	59.9%	60.6%	61.4%	62.1%	62.8%	63.5%	64.3%	65.0%	65.7%
Total Billing for all the cities	k.FCPA	1,409,774	1,431,275	1,452,865	1,474,545	1,496,315	1,518,174	1,516,804	1,550,115	1,663,766	1,779,623	1,897,686	2,026,451	2,170,837
Utilization Charge of Facilities	k.FCPA	197,368	200,379	203,401	206,456	209,484	212,544	212,353	217,016	232,927	249,147	265,676	283,703	303,917
1. Operating Revenue														
Water Sales Rev.	k.FCPA	1,212,406	1,230,897	1,249,464	1,268,109	1,286,831	1,305,630	1,304,452	1,333,099	1,430,838	1,530,475	1,632,010	1,742,748	1,866,920
Meter Lease Charge	k.FCPA	320,929	325,824	330,739	335,674	340,630	345,606	345,294	352,877	378,749	405,124	432,000	461,313	494,182
Others	k.FCPA	16,951	17,209	17,469	17,730	17,992	18,254	18,238	18,638	20,005	21,398	22,818	24,366	26,102
Sub-total (A)	k.FCPA	1,550,286	1,573,930	1,597,672	1,621,513	1,645,452	1,669,490	1,667,984	1,704,614	1,829,593	1,956,997	2,086,827	2,228,427	2,387,204
2. Non-operating Revenue														
Interest Income	k.FCPA	7,328	7,439	7,552	7,664	7,777	7,891	7,884	8,057	8,648	9,250	9,864	10,533	11,283
Miscellaneous Income	k.FCPA	21,844	22,177	22,511	22,847	23,185	23,523	23,502	24,018	25,779	27,574	29,404	31,399	33,636
Sub-total (B)	k.FCPA	29,171	29,616	30,063	30,512	30,962	31,414	31,386	32,075	34,427	36,824	39,267	41,932	44,920
Total (C) = (A) + (B)	k.FCPA	1,579,458	1,603,546	1,627,735	1,652,024	1,676,414	1,700,905	1,699,370	1,736,689	1,864,020	1,993,822	2,126,095	2,270,359	2,432,124
1. Operating Expenditure														
Personnel Exp.	k.FCPA	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000
Cost of Chemicals	k.FCPA	152,601	152,982	153,364	153,745	154,127	154,508	152,545	154,074	163,461	172,848	182,236	192,450	203,866
Cost of Electricity	k.FCPA	117,978	118,273	118,567	118,862	119,157	119,452	117,924	119,116	126,374	133,631	140,889	148,770	157,611
Fuel, Oils	k.FCPA	239,459	240,057	240,656	241,255	241,853	242,452	239,371	241,770	256,501	271,231	285,961	301,958	319,903
Furniture & Tools	k.FCPA	64,003	64,163	64,323	64,483	64,643	64,803	63,979	64,620	68,558	72,495	76,432	80,707	85,504
Transportation	k.FCPA	28,173	28,243	28,314	28,384	28,455	28,525	28,163	28,445	30,178	31,911	33,644	35,526	37,637
Repair	k.FCPA	33,480	33,647	33,814	33,981	34,148	34,315	33,488	33,803	35,863	37,922	39,982	42,118	44,727
Communication	k.FCPA	35,457	35,546	35,635	35,724	35,812	35,901	35,444	35,800	37,981	40,162	42,343	44,712	47,569
Lease & Commission	k.FCPA	287,989	288,584	289,179	289,774	290,369	290,964	287,902	290,287	254,927	269,567	284,207	300,105	317,940
Others	k.FCPA	60,607	60,759	60,911	61,062	61,214	61,365	60,385	61,193	64,921	68,649	72,377	76,426	80,968
Depreciation	k.FCPA	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000
Sub-total (D)	k.FCPA	1,677,747	1,680,171	1,682,596	1,685,020	1,687,445	1,689,869	1,677,390	1,687,108	1,746,762	1,806,416	1,866,070	1,930,351	2,003,524
2. Non-operation Expenditure														
Interest Expenditure	k.FCPA													
Taxes & Registrations	k.FCPA													
Sub-total (E)	k.FCPA													
Total (F) = (D) + (E)	k.FCPA	1,677,747	1,680,171	1,682,596	1,685,020	1,687,445	1,689,869	1,677,390	1,687,108	1,746,762	1,806,416	1,866,070	1,930,351	2,003,524
Operating Profit/Loss (G) = (C) - (F)	k.FCPA	159,911	160,375	160,956	161,355	161,755	161,959	161,300	171,128	180,955	190,783	201,455	213,427	226,603
Revenue before deduction of Utilization Fee of Facilities	k.FCPA	1,837,505	1,840,329	1,843,152	1,845,976	1,848,800	1,851,624	1,837,090	1,848,409	1,917,890	1,987,371	2,056,853	2,132,306	2,216,952
Operating Profit/Loss (H) = (G) + (F)	k.FCPA	2,258,472	2,256,782	2,255,117	2,253,452	2,251,787	2,250,122	2,248,457	2,246,792	2,245,127	2,243,462	2,241,797	2,240,132	2,238,467
Revenue before deduction of Utilization Fee of Facilities	k.FCPA	1,776,926	1,803,925	1,831,136	1,858,461	1,913,449	1,911,723	1,953,706	2,096,947	2,242,947	2,391,771	2,554,062	2,736,041	2,936,041
Unit Cost of Water Supply (FCPA/m ³)	k.FCPA	437	431	426	420	414	409	406	400	387	375	364	353	343
Unit Sales Price of Water Supply (FCPA/m ³)	k.FCPA	423	423	423	423	423	423	423	423	423	423	423	423	423

Table 3 Projection of Operating Cost/Benefit of Bangui City, Case 3 (In Case of New System of Groundwater)

Item	Unit	Result of SODECA's Balance Sheet in 1998	Estimation of Cost/Benefit														
			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Mean Annual Water Supply Volume by Production Wells	① m ³ /year	8,940,900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accounted-for Water Volume per Annum	② m ³ /year	5,312,001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accounted-for Water as Percent of Total	③ %	= ② / ①															
Total Billing for Water Production by Wells	④ k.FCPA	1,781,922	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Utilization Charge of Facilities	⑤ k.FCPA	250,301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Operating Revenue																	
Water Sales Rev.	⑥ k.FCPA	1,531,621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meter Lease Charge	⑦ k.FCPA	405,427	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	⑧ k.FCPA	21,414	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (A)	k.FCPA	1,958,462	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Non-operating Revenue																	
Interest Income	⑨ k.FCPA	9,262	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Income	⑩ k.FCPA	27,610	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (B)	k.FCPA	36,872	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total (C) = (A) + (B)	k.FCPA	1,995,334	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. Operating Expenditure																	
Personnel Exp.	⑪ k.FCPA	534,157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost of Chemicals	⑫ k.FCPA	165,052	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost of Electricity	⑬ k.FCPA	143,066	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel, Oil	⑭ k.FCPA	290,381	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Furniture & Tools	⑮ k.FCPA	77,613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation	⑯ k.FCPA	34,164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repair	⑰ k.FCPA	40,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Communication	⑱ k.FCPA	42,998	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lease & Commission	⑲ k.FCPA	288,599	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Others	⑳ k.FCPA	73,496	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Depreciation	㉑ k.FCPA	174,368	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (D)	k.FCPA	1,884,492	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2. Non-operating Expenditure																	
Interest Expenditure	㉒ k.FCPA	111,243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes & Registrations	㉓ k.FCPA	82,488	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (E)	k.FCPA	193,731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total (F) = (D) + (E)	k.FCPA	2,078,223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Profit/Loss (G) = (C) - (F)	k.FCPA	-82,889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue before Deduction of Utilization Fee of Facilities	㉔ k.FCPA	2,245,635	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Cost of Water Supply (FCPA/m ³)																	
Unit Sales Price of Water Supply (FCPA/m ³)																	

Table 4 Projection of Operating Cost/Benefit of Bangui City, Case 4 (Integration of Existing System and New System)

Item	Unit	Estimation of Cost/Benefit												
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Base Price														
Mean Annual Water Supply Volume by Production Wells	m ³ /year	7,373,000	7,391,433	7,409,865	7,428,298	7,446,730	7,465,163	7,483,595	7,502,027	7,520,459	7,538,891	7,557,323	7,575,755	7,594,187
Accounted for Water Volume per Annum	m ³ /year	4,202,610	4,266,704	4,331,066	4,395,695	4,460,591	4,525,755	4,591,243	4,656,995	4,723,052	4,789,452	4,856,147	4,923,186	4,990,520
Accounted for Water as Percent of Total	%	0.570	0.577	0.585	0.592	0.599	0.606	0.614	0.621	0.628	0.635	0.642	0.649	0.656
Total Billing for Water Production	k.FCPA	1,409,774	1,431,275	1,452,865	1,474,545	1,496,315	1,518,174	1,539,715	1,561,027	1,582,100	1,602,934	1,623,529	1,643,875	1,663,972
Utilization Charge of Facilities	k.FCPA	197,368	200,379	203,401	206,436	209,484	212,544	228,735	233,455	252,833	272,523	292,526	312,626	332,768
1. Operating Revenue														
Water Sales Rev.	k.FCPA	1,212,406	1,230,897	1,249,464	1,268,109	1,286,831	1,305,630	1,324,507	1,343,462	1,362,495	1,381,606	1,400,794	1,420,060	1,439,404
Meter Lease Charge	k.FCPA	320,929	325,824	330,739	335,674	340,630	345,606	350,602	355,618	360,654	365,710	370,786	375,882	380,998
Others	k.FCPA	16,951	17,209	17,469	17,730	17,992	18,254	18,518	18,784	19,051	19,319	19,588	19,858	20,129
Sub-total (A)	k.FCPA	1,550,286	1,573,930	1,597,672	1,621,513	1,645,452	1,669,490	1,723,775	1,788,696	1,853,822	1,919,452	1,985,682	2,052,516	2,119,952
2. Non-operating Revenue														
Interest Income	k.FCPA	7,328	7,439	7,552	7,664	7,777	7,891	7,894	8,057	8,648	9,250	9,864	10,533	11,285
Miscellaneous Income	k.FCPA	21,844	22,177	22,511	22,847	23,185	23,523	23,862	24,202	24,543	24,885	25,228	25,572	25,917
Sub-total (B)	k.FCPA	29,172	29,616	30,063	30,512	30,962	31,414	31,866	32,318	32,772	33,228	33,685	34,143	34,602
Total (C) = (A) + (B)	k.FCPA	1,579,458	1,603,546	1,627,735	1,652,024	1,676,414	1,700,905	1,725,641	1,820,771	1,965,832	2,113,383	2,263,424	2,418,293	2,579,690
Cost & Benefit Account														
Expenditure														
Personnel Exp.	k.FCPA	534,000	534,000	534,000	534,000	534,000	534,000	544,898	544,898	544,898	544,898	544,898	544,898	544,898
Cost of Chemicals	k.FCPA	152,601	152,993	153,384	153,775	154,167	154,558	154,949	155,340	155,731	156,122	156,513	156,904	157,295
Cost of Electricity	k.FCPA	117,978	118,273	118,567	118,862	119,157	119,452	130,384	131,366	141,315	151,064	160,813	171,186	180,027
Fuel, Oil	k.FCPA	239,459	240,057	240,656	241,255	241,853	242,452	243,051	243,650	244,249	244,848	245,447	246,046	246,645
Furniture & Tools	k.FCPA	64,003	64,163	64,323	64,483	64,643	64,803	67,851	68,492	72,289	78,085	82,881	87,678	92,474
Transportation	k.FCPA	28,173	28,243	28,314	28,384	28,455	28,525	29,867	30,149	32,280	34,372	36,483	38,594	40,705
Repair	k.FCPA	33,480	33,564	33,647	33,731	33,815	33,899	35,093	35,829	38,338	40,847	43,356	45,865	48,374
Communication	k.FCPA	35,457	35,546	35,635	35,723	35,812	35,901	37,589	37,945	40,602	43,259	45,916	48,574	51,231
Lease & Commission	k.FCPA	237,989	238,584	239,179	239,774	240,369	240,964	257,902	260,287	284,927	299,567	314,207	328,847	343,487
Others	k.FCPA	60,607	60,759	60,911	61,062	61,214	61,365	60,585	61,193	64,921	68,649	72,377	76,105	79,833
Depreciation	k.FCPA	174,000	174,000	174,000	174,000	174,000	174,000	204,000	204,000	204,000	204,000	204,000	204,000	204,000
Sub-total (D)	k.FCPA	1,677,747	1,680,171	1,682,596	1,685,020	1,687,444	1,689,869	1,743,146	1,757,864	1,823,803	1,889,742	1,955,681	2,021,620	2,087,559
2. Non-operation Expenditure														
Interest Expenditure	k.FCPA													
Taxes & Registrations	k.FCPA													
Sub-total (E)	k.FCPA													
Total (F) = (D) + (E)	k.FCPA	1,677,747	1,680,171	1,682,596	1,685,020	1,687,444	1,689,869	1,743,146	1,757,864	1,823,803	1,889,742	1,955,681	2,021,620	2,087,559
Operating Profit/Loss (G) = (C) - (F)	k.FCPA													
Revenue before deduction of Utilization Fee of Facilities	k.FCPA	1,776,826	1,803,925	1,831,136	1,858,461	1,885,998	1,913,449	2,011,896	2,054,227	2,218,665	2,385,906	2,555,949	2,730,919	2,912,458
Unit Cost of Water Supply (FCFA/m ³)	k.FCPA	437	431	426	420	414	409	391	386	370	356	344	334	326
Unit Sales Price of Water Supply (FCFA/m ³)	k.FCPA	423	423	423	423	423	423	413	412	412	411	410	410	411

Table 5 Projection of Operating Cost/Benefit of Bangui City, Case 5
(On the Basis of Actual SODECA's Balance Sheet in 1998 and Water Demand Projection of Present Water Supply Area but Except Zone B1, B2, B3, and Water Tariff 10% Reduction for Kiosk Users)

Item	Unit	Result of SODECA's Balance Sheet in 1998	Estimation of Cost/Benefit												
			1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Water Supply Volume	Bangui City		7,373,000	7,391,433	7,409,865	7,428,298	7,446,730	7,465,163	7,570,289	7,444,175	7,897,774	8,351,273	8,804,822	9,297,353	9,849,890
Accounted-for Water Volume per Annum	①		4,202,610	4,266,704	4,331,066	4,395,695	4,460,591	4,525,755	4,521,672	4,620,972	4,959,771	5,305,146	5,657,098	6,040,955	6,471,378
Accounted-for Water as Percent of Total	②	53.2.001	57.0%	57.7%	58.5%	59.2%	59.9%	60.6%	61.4%	62.1%	62.8%	63.5%	64.3%	65.0%	65.7%
Total Billing for Bangui City	k.FCPA	1,781,922	1,402,411	1,423,799	1,445,277	1,466,843	1,488,409	1,510,244	1,508,882	1,542,018	1,655,075	1,770,327	1,887,774	2,015,867	2,159,499
Utilization Charge of Facilities	k.FCPA	250,301	196,338	199,332	202,339	205,358	208,390	211,434	211,243	215,883	231,711	247,846	264,288	282,221	302,230
1. Operating Revenue			1,206,073	1,224,467	1,242,938	1,261,485	1,280,109	1,298,810	1,297,638	1,326,136	1,423,365	1,522,481	1,623,485	1,733,645	1,857,169
Water Sales Rev.	k.FCPA	①-②	319,253	324,122	329,011	333,921	338,851	343,801	343,491	351,034	376,771	403,008	429,744	458,904	491,601
Meter Lease Charge	k.FCPA	③	16,862	17,120	17,378	17,637	17,898	18,159	18,413	18,541	19,900	21,286	22,698	24,239	25,966
Others	k.FCPA	④	1,542,189	1,565,709	1,589,327	1,613,043	1,636,858	1,660,770	1,659,272	1,695,711	1,820,036	1,946,775	2,075,928	2,216,788	2,374,736
Sub-total (A)	k.FCPA		7,328	7,439	7,552	7,664	7,777	7,891	7,884	8,057	8,648	9,250	9,864	10,533	11,283
2. Non-operating Revenue			21,844	22,177	22,511	22,847	23,185	23,523	23,502	24,018	25,779	27,574	29,404	31,399	33,636
Interest Income	k.FCPA	⑤	29,171	29,616	30,063	30,512	30,962	31,414	31,386	32,075	34,427	36,824	39,267	41,932	44,920
Miscellaneous Income	k.FCPA	⑥	1,571,360	1,595,325	1,619,390	1,643,555	1,667,820	1,692,185	1,690,658	1,727,786	1,854,464	1,983,600	2,115,195	2,258,720	2,419,655
Total (C) = (A) + (B)	k.FCPA		534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000
1. Operating Expenditure			152,601	152,982	153,364	153,745	154,127	154,508	152,545	154,074	163,461	172,848	182,236	192,430	203,866
Personnel Exp.	k.FCPA	⑦	117,278	118,273	119,268	119,268	119,268	119,268	117,934	119,934	126,374	133,631	140,889	148,770	157,611
Cost of Chemicals	k.FCPA	⑧	239,459	240,057	240,656	241,255	241,853	242,452	239,371	241,770	256,501	271,231	285,961	301,958	319,903
Cost of Electricity	k.FCPA	⑨	64,003	64,163	64,323	64,483	64,643	64,803	63,979	64,620	68,558	72,495	76,432	80,707	85,504
Fuel, Oils	k.FCPA	⑩	28,173	28,243	28,314	28,384	28,455	28,525	28,163	28,445	30,178	31,911	33,644	35,377	37,637
Furniture & Tools	k.FCPA	⑪	33,480	33,564	33,647	33,731	33,815	33,899	33,468	33,803	35,863	37,922	39,982	42,042	44,727
Transportation	k.FCPA	⑫	35,457	35,546	35,635	35,723	35,812	35,901	35,444	35,800	37,981	40,162	42,343	44,712	47,369
Repair	k.FCPA	⑬	257,989	258,584	259,179	259,774	260,369	260,964	237,902	240,287	254,927	269,567	284,207	300,105	317,940
Communication	k.FCPA	⑭	60,607	60,759	60,911	61,062	61,214	61,365	60,585	61,193	64,921	68,649	72,377	76,426	80,968
Leave & Commission	k.FCPA	⑮	174,900	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000	174,000
Others	k.FCPA	⑯	1,677,747	1,680,171	1,682,596	1,685,020	1,687,445	1,689,869	1,677,390	1,687,108	1,746,762	1,806,416	1,866,070	1,930,851	2,003,524
Depreciation	k.FCPA	⑰													
Sub-total (D)	k.FCPA	⑱	159,758	160,157	160,557	160,956	161,355	161,755	159,699	161,300	171,128	180,955	190,783	201,455	213,427
2. Non-operation Expenditure			1,837,505	1,840,329	1,843,152	1,845,976	1,848,800	1,851,624	1,837,090	1,848,409	1,917,890	1,987,371	2,056,853	2,139,306	2,216,952
Interest Expenditure	k.FCPA	⑲	-266,145	-245,003	-223,762	-202,421	-180,980	-159,439	-146,432	-120,622	-63,426	-3,771	58,342	126,414	202,704
Taxes & Registrations	k.FCPA	⑳	1,767,698	1,794,657	1,821,729	1,848,813	1,876,210	1,903,619	1,901,901	1,943,669	2,086,174	2,231,446	2,379,483	2,540,941	2,721,985
Sub-total (E)	k.FCPA	㉑	437	431	426	420	414	409	406	400	387	375	364	353	343
Total (F) = (D) + (E)	k.FCPA	㉒	421	421	421	421	421	421	421	421	421	421	421	421	421
Operating Profits/Loss (G) = (C) - (F)	k.FCPA	㉓	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000	1,112,000
Revenue before deduction of Utilization Fee of Facilities	k.FCPA	㉔	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635	2,245,635
Unit Cost of Water Supply (FCPA/m)	k.FCPA	㉕	391	391	391	391	391	391	391	391	391	391	391	391	391
Unit Sales Price of Water Supply (FCPA/m)	k.FCPA	㉖	423	423	423	423	423	423	423	423	423	423	423	423	423

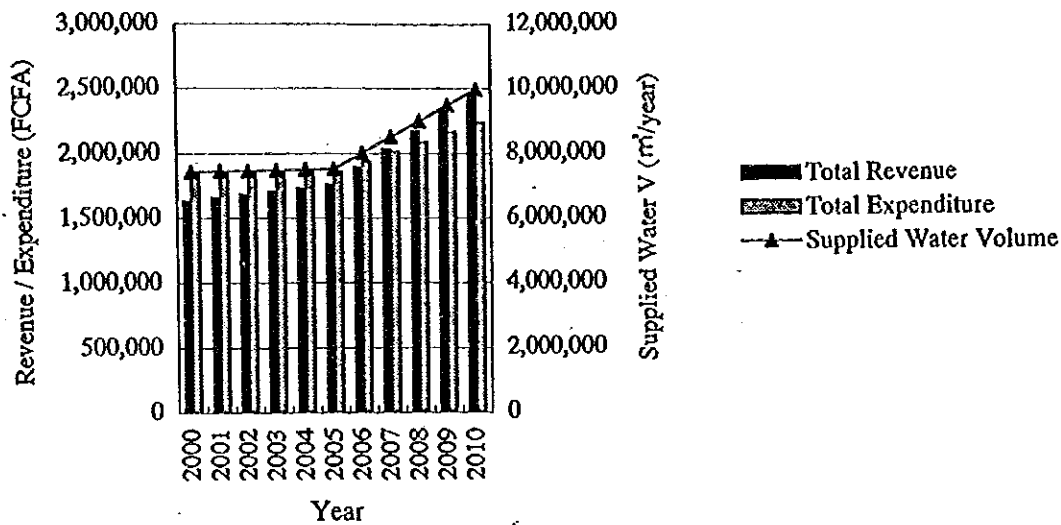
Table 7 Projection of Operating Cost/Benefit of Bangui City, Case 7 (Integration of Existing System and New System, 10% Reduction of Water Sales Price of Groundwater)

Item	Unit	Estimation of Cost/Benefit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Mean Annual Water Supply Volume by Production Wells Accounted-for Water Volume per Annum	① m ³ /year	7,373,000	7,391,433	7,409,865	7,428,298	7,446,730	7,465,163	7,483,595	7,502,028	7,520,461	7,538,894	7,557,327	7,575,760	7,594,193	7,612,626	7,631,059	7,649,492	7,667,925	7,686,358	7,704,791	7,723,224	7,741,657	7,760,090	7,778,523	7,796,956	7,815,389	7,833,822	7,852,255	7,870,688	7,889,121	7,907,554	7,925,987	7,944,420	7,962,853	7,981,286	7,999,719	8,018,152	8,036,585	8,055,018	8,073,451	8,091,884	8,110,317	8,128,750	8,147,183	8,165,616	8,184,049	8,202,482	8,220,915	8,239,348	8,257,781	8,276,214	8,294,647	8,313,080	8,331,513	8,349,946	8,368,379	8,386,812	8,405,245	8,423,678	8,442,111	8,460,544	8,478,977	8,497,410	8,515,843	8,534,276	8,552,709	8,571,142	8,589,575	8,608,008	8,626,441	8,644,874	8,663,307	8,681,740	8,700,173	8,718,606	8,737,039	8,755,472	8,773,905	8,792,338	8,810,771	8,829,204	8,847,637	8,866,070	8,884,503	8,902,936	8,921,369	8,939,802	8,958,235	8,976,668	8,995,101	9,013,534	9,031,967	9,050,400	9,068,833	9,087,266	9,105,699	9,124,132	9,142,565	9,161,000	9,179,435	9,197,870	9,216,305	9,234,740	9,253,175	9,271,610	9,290,045	9,308,480	9,326,915	9,345,350	9,363,785	9,382,220	9,400,655	9,419,090	9,437,525	9,455,960	9,474,395	9,492,830	9,511,265	9,529,700	9,548,135	9,566,570	9,585,005	9,603,440	9,621,875	9,640,310	9,658,745	9,677,180	9,695,615	9,714,050	9,732,485	9,750,920	9,769,355	9,787,790	9,806,225	9,824,660	9,843,095	9,861,530	9,879,965	9,898,400	9,916,835	9,935,270	9,953,705	9,972,140	9,990,575	10,009,010	10,027,445	10,045,880	10,064,315	10,082,750	10,101,185	10,119,620	10,138,055	10,156,490	10,174,925	10,193,360	10,211,795	10,230,230	10,248,665	10,267,100	10,285,535	10,303,970	10,322,405	10,340,840	10,359,275	10,377,710	10,396,145	10,414,580	10,433,015	10,451,450	10,469,885	10,488,320	10,506,755	10,525,190	10,543,625	10,562,060	10,580,495	10,598,930	10,617,365	10,635,800	10,654,235	10,672,670	10,691,105	10,709,540	10,727,975	10,746,410	10,764,845	10,783,280	10,801,715	10,820,150	10,838,585	10,857,020	10,875,455	10,893,890	10,912,325	10,930,760	10,949,195	10,967,630	10,986,065	10,004,500	10,022,935	10,041,370	10,059,805	10,078,240	10,096,675	10,115,110	10,133,545	10,151,980	10,170,415	10,188,850	10,207,285	10,225,720	10,244,155	10,262,590	10,281,025	10,299,460	10,317,895	10,336,330	10,354,765	10,373,200	10,391,635	10,410,070	10,428,505	10,446,940	10,465,375	10,483,810	10,502,245	10,520,680	10,539,115	10,557,550	10,575,985	10,594,420	10,612,855	10,631,290	10,649,725	10,668,160	10,686,595	10,705,030	10,723,465	10,741,900	10,760,335	10,778,770	10,797,205	10,815,640	10,834,075	10,852,510	10,870,945	10,889,380	10,907,815	10,926,250	10,944,685	10,963,120	10,981,555	10,000,000	10,018,445	10,036,890	10,055,335	10,073,780	10,092,225	10,110,670	10,129,115	10,147,560	10,166,005	10,184,450	10,202,895	10,221,340	10,239,785	10,258,230	10,276,675	10,295,120	10,313,565	10,332,010	10,350,455	10,368,900	10,387,345	10,405,790	10,424,235	10,442,680	10,461,125	10,479,570	10,498,015	10,516,460	10,534,905	10,553,350	10,571,795	10,590,240	10,608,685	10,627,130	10,645,575	10,664,020	10,682,465	10,700,910	10,719,355	10,737,800	10,756,245	10,774,690	10,793,135	10,811,580	10,830,025	10,848,470	10,866,915	10,885,360	10,903,805	10,922,250	10,940,695	10,959,140	10,977,585	10,996,030	10,014,475	10,032,920	10,051,365	10,069,810	10,088,255	10,106,700	10,125,145	10,143,590	10,162,035	10,180,480	10,198,925	10,217,370	10,235,815	10,254,260	10,272,705	10,291,150	10,309,595	10,328,040	10,346,485	10,364,930	10,383,375	10,401,820	10,420,265	10,438,710	10,457,155	10,475,600	10,494,045	10,512,490	10,530,935	10,549,380	10,567,825	10,586,270	10,604,715	10,623,160	10,641,605	10,660,050	10,678,495	10,696,940	10,715,385	10,733,830	10,752,275	10,770,720	10,789,165	10,807,610	10,826,055	10,844,500	10,862,945	10,881,390	10,900,835	10,919,280	10,937,725	10,956,170	10,974,615	10,993,060	10,011,505	10,029,950	10,048,395	10,066,840	10,085,285	10,103,730	10,122,175	10,140,620	10,159,065	10,177,510	10,195,955	10,214,400	10,232,845	10,251,290	10,269,735	10,288,180	10,306,625	10,325,070	10,343,515	10,361,960	10,380,405	10,398,850	10,417,295	10,435,740	10,454,185	10,472,630	10,491,075	10,509,520	10,527,965	10,546,410	10,564,855	10,583,300	10,601,745	10,620,190	10,638,635	10,657,080	10,675,525	10,693,970	10,712,415	10,730,860	10,749,305	10,767,750	10,786,195	10,804,640	10,823,085	10,841,530	10,859,975	10,878,420	10,896,865	10,915,310	10,933,755	10,952,200	10,970,645	10,989,090	10,007,535	10,025,980	10,044,425	10,062,870	10,081,315	10,099,760	10,118,205	10,136,650	10,155,095	10,173,540	10,191,985	10,210,430	10,228,875	10,247,320	10,265,765	10,284,210	10,302,655	10,321,100	10,339,545	10,357,990	10,376,435	10,394,880	10,413,325	10,431,770	10,450,215	10,468,660	10,487,105	10,505,550	10,523,995	10,542,440	10,560,885	10,579,330	10,597,775	10,616,220	10,634,665	10,653,110	10,671,555	10,690,000	10,708,445	10,726,890	10,745,335	10,763,780	10,782,225	10,800,670	10,819,115	10,837,560	10,856,005	10,874,450	10,892,895	10,911,340	10,929,785	10,948,230	10,966,675	10,985,120	10,003,565	10,022,010	10,040,455	10,058,900	10,077,345	10,095,790	10,114,235	10,132,680	10,151,125	10,169,570	10,188,015	10,206,460	10,224,905	10,243,350	10,261,795	10,280,240	10,298,685	10,317,130	10,335,575	10,354,020	10,372,465	10,390,910	10,409,355	10,427,800	10,446,245	10,464,690	10,483,135	10,501,580	10,520,025	10,538,470	10,556,915	10,575,360	10,593,805	10,612,250	10,630,695	10,649,140	10,667,585	10,686,030	10,704,475	10,722,920	10,741,365	10,759,810	10,778,255	10,796,700	10,815,145	10,833,590	10,852,035	10,870,480	10,888,925	10,907,370	10,925,815	10,944,260	10,962,705	10,981,150	10,999,595	10,018,040	10,036,485	10,054,930	10,073,375	10,091,820	10,110,265	10,128,710	10,147,155	10,165,600	10,184,045	10,202,490	10,220,935	10,239,380	10,257,825	10,276,270	10,294,715	10,313,160	10,331,605	10,350,050	10,368,495	10,386,940	10,405,385	10,423,830	10,442,275	10,460,720	10,479,165	10,497,610	10,516,055	10,534,500	10,552,945	10,571,390	10,589,835	10,608,280	10,626,725	10,645,170	10,663,615	10,682,060	10,700,505	10,718,950	10,737,395	10,755,840	10,774,285	10,792,730	10,811,175	10,829,620	10,848,065	10,866,510	10,884,955	10,903,400	10,921,845	10,940,290	10,958,735	10,977,180	10,995,625	10,014,070	10,032,515	10,050,960	10,069,405	10,087,850	10,106,295	10,124,740	10,143,185	10,161,630	10,180,075	10,198,520	10,216,965	10,235,410	10,253,855	10,272,300	10,290,745	10,309,190	10,327,635	10,346,080	10,364,525	10,382,970	10,401,415	10,419,860	10,438,305	10,456,750	10,475,195	10,493,640	10,512,085	10,530,530	10,548,975	10,567,420	10,585,865	10,604,310	10,622,755	10,641,200	10,659,645	10,678,090	10,696,535	10,714,980	10,733,425	10,751,870	10,770,315	10,788,760	10,807,205	10,825,650	10,844,095	10,862,540	10,880,985	10,899,430	10,917,875	10,936,320	10,954,765	10,973,210	10,991,655	10,010,100	10,028,545	10,046,990	10,065,435	10,083,880	10,102,325	10,120,770	10,139,215	10,157,660	10,176,105	10,194,550	10,212,995	10,231,440	10,249,885	10,268,330	10,286,775	10,305,220	10,323,665	10,342,110	10,360,555	10,379,000	10,397,445	10,415,890	10,434,335	10,452,780	10,471,225	10,489,670	10,508,115	10,526,560	10,545,005	10,563,450	10,581,895	10,600,340	10,618,785	10,637,230	10,655,675	10,674,120	10,692,565	10,711,010	10,729,455	10,747,900	10,766,345	10,784,790	10,803,235	10,821,680	10,840,125	10,858,570	10,877,015	10,895,460	10,913,905	10,932,350	10,950,795	10,969,240	10,987,685	10,006,130	10,024,575	10,043,020	10,061,465	10,079,910	10,098,355	10,116,800	10,135,245	10,153,690	10,172,135	10,190,580	10,209,025	10,227,470	10,245,915	10,264,360	10,282,805	10,301,250	10,319,695	10,338,140	10,356,585	10,375,030	10,393,475	10,411,920	10,430,365	10,448,810	10,467,255	10,485,700	10,504,145	10,522,590	10,541,035	10,559,480	10,577,925	10,596,370	10,614,815	10,633,260	10,651,705	10,670,150	10,688,595	10,707,040	10,725,485	10,743,930	10,762,375	10,780,820	10,799,265	10,817,710	10,836,155	10,854,600	10,873,045	10,891,490	10,909,935	10,928,380	10,946,825	10,965,270	10,983,715	10,002,160	10,020,605	10,039,050	10,057,495	10,075,940	10,094,385	10,112,830	10,131,275	10,149,720	10,168,165	10,186,610	10,205,055	10,223,500	10,241,945	10,260,390	10,278,835	10,297,280	10,315,725	10,334,170	10,352,615	10,371,060	10,389,505	10

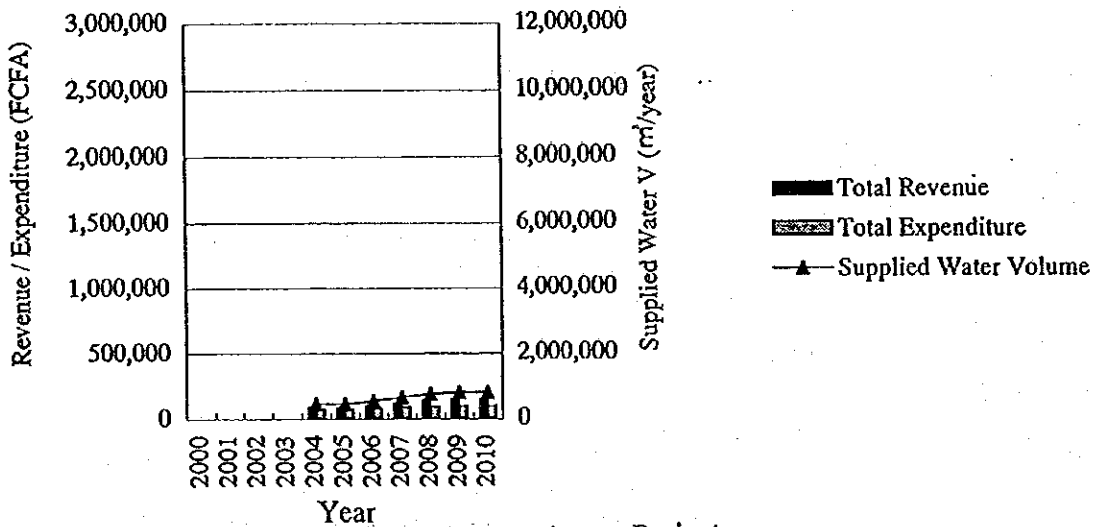
Table 8 Detailed Conditions for the Case Study

	Item	Conditions	
Case 1	Water Supply Volume and Water Service Area	It was based on Water Demand Projection of the existing water supply area done by the Master Plan study. However, water supply volume for B1, B2 & B3 of Bimbo district, where difficulties of water service were found due to low pressure and lack of water, were reduced to about half of the projected water demand.	
	Accounted-for Water Volume	Depending on the 98 year SODECA's data, which show the Accounted-for Water as Percent of Bangui was 57.8 %, it was assumed that the Accounted-for Water as Percent would increase linearly from 57% in 1998 to 71% in 2015 which was deduced in the Master Plan study. The Accounted-for Water Volume was gained by multiplying the above percentage by total water supply volume.	
	Total Billing	The 98 year SODECA's Balance Sheet shows the mean water sales price was 335.4 FCFA/m ³ on the basis of the current water tariff. Total Billing was estimated by multiplying the above mean sales price by accounted-for water volume.	
	Utilization charge of the water service system	Depending on the 98 year SODECA's Balance Sheet, a 14% of the Total Billing would be paid to the Government of the CAR.	
	Revenue	Water Sales Revenue	= (Total Billing) - (Utilization charge of the water service system)
		Meter Lease Charge	Based on the 98 year SODECA's Balance Sheet, 26.47% of Water Sales Revenue was figured in.
		Others	Based on the 98 year SODECA's Balance Sheet, 1.40% of Water Sales Revenue was figured in.
		Interest Income	Based on the 98 year SODECA's Balance Sheet, 1.74 FCFA/m ³ times Accounted-for Water Volume was figured in.
		Miscellaneous Income	Based on the 98 year SODECA's Balance Sheet, 5.20 FCFA/m ³ times Accounted-for Water Volume was figured in.
	Expenditure	Personnel Expenditure	The actual value showed in the 98 year SODECA's Balance Sheet was figured in.
		Cost of Chemical	Based on the 98 year SODECA's Balance Sheet, 20.70 FCFA/m ³ times Water Supply Volume was figured in.
		Cost of Electricity	Based on the 98 year SODECA's Balance Sheet, 16.00 FCFA/m ³ times Water Supply Volume was figured in.
		Cost of Fuel & Oils	Based on the 98 year SODECA's Balance Sheet, 32.48 FCFA/m ³ times Water Supply Volume was figured in.
		Furniture and Tools	Based on the 98 year SODECA's Balance Sheet, 8.68 FCFA/m ³ times Water Supply Volume was figured in.
Transportation		Based on the 98 year SODECA's Balance Sheet, 3.82 FCFA/m ³ times Water Supply Volume was figured in.	
Repair		Based on the 98 year SODECA's Balance Sheet, 4.54 FCFA/m ³ times Water Supply Volume was figured in.	
Communication		Based on the 98 year SODECA's Balance Sheet, 4.81 FCFA/m ³ times Water Supply Volume was figured in.	
Lease & Commission		Based on the 98 year SODECA's Balance Sheet, 32.28 FCFA/m ³ times Water Supply Volume was figured in.	
Others		Based on the 98 year SODECA's Balance Sheet, 8.22 FCFA/m ³ times Water Supply Volume was figured in.	
Depreciation		The actual value showed in the 98 year SODECA's Balance Sheet was figured in.	
Non-operational Expenditure	Based on the 98 year SODECA's Balance Sheet, 21.67 FCFA/m ³ times Water Supply Volume was figured in.		
Case 2	Water Supply Volume and Water Service Area	This case analyzes a situation of the water supply volume and service area covered by the existing water supply system after the Groundwater Development Project to be inaugurated in 2004. Therefore it is based on Water Demand Projection done by the Master Plan study, but B1, B2 & B3, where would be covered by the Groundwater Development Project, were excluded from the service area of the existing system.	
	Total Billing, Accounted-for Water Volume, & the Detailed of Revenue	Same as Case 1.	
	Detailed of Expenditure	Same as Case 1.	

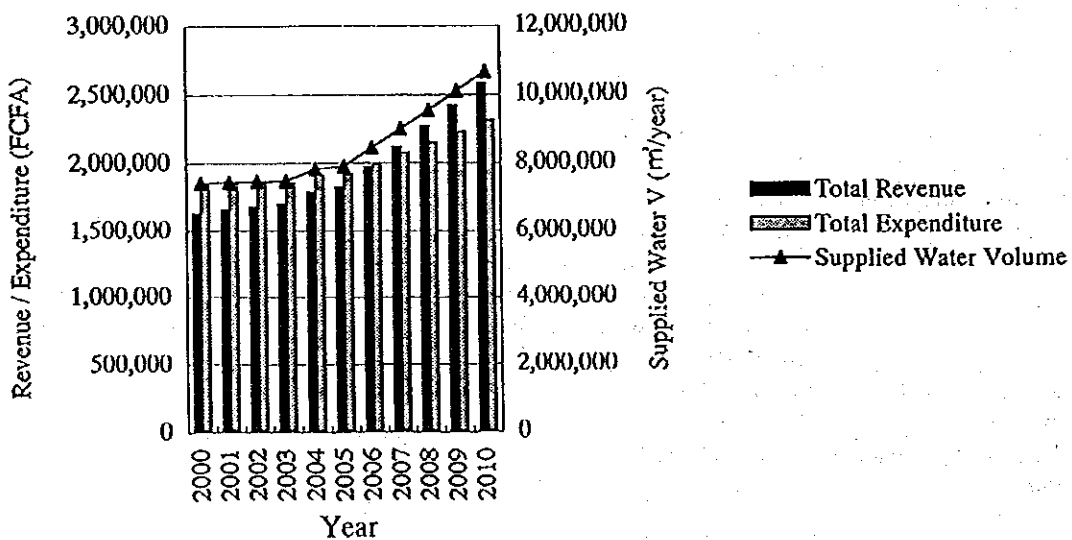
Case 8	Water Supply Volume and Water Service Area	It was based on the result of Water Demand Projection on the Groundwater Development Project done by the Master Plan study.	
	Accounted-for Water Volume	Accounted-for Water as Percent, which was assumed in the Water Demand Projection on the Groundwater Development Project, times the Water Supply Volume was figured in.	
	Total Billing	Mean Water Sales Price was estimated at 232.2 FCFA/m ³ which was a weighted average of the current water sales prices for each category of water users and their water supply volumes which were gained in the Water Demand Projection. Total Billing was gained by the mean water sales price times Accounted-for Water Volume.	
	Utilization charge of the water service system	It was assumed that 20% of the Total Billing would be paid to the Government of the CAR.	
	Revenue	Water Sales Revenue	Same as Case 1.
		Meter Lease Charge	Same as Case 1.
		Others	Same as Case 1.
		Other Detailed items of Revenue	They were neglected for keeping the analysis reliable.
	Expenditure	Personnel Expenditure	Personnel Expenditure for the Groundwater Development Project was estimated in the Feasibility Study. This value was figured in.
		Cost of Chemicals and Electricity	The values estimated in the Feasibility Study were figured in.
		Cost of Fuel and Oils	1/3 of the actual cost in the 98 year SODECA's Balance Sheet was figured in.
		Furniture & Tools, Transportation, Repair, Communication, Lease & Commission, Others	The unit costs, which were adopted as same as Case 1, times Water Supply Volume was figured in.
		Depreciation	30 million FCFA was figured in during the initial stage of operation of Groundwater Development Project
Non-operational Expenditure		It was neglected.	
Case 5	Water Supply Volume and Water Service Area	Same as Case 2.	
	Accounted-for Water Volume	Same as Case 2.	
	Total Billing	Mean Water Sales Price was estimated at 333.7 FCFA/m ³ which was a weighted average of the water sales prices, 10% reduced one for the kiosk user and the current ones for other subscribers, and their water supply volumes which were gained in the Water Demand Projection. Total Billing was gained by the mean water sales price times Accounted-for Water Volume.	
	Utilization charge of the water service system	Same as Case 2.	
	Detailed items of Revenue and Expenditure	Same as Case 2.	
Case 6	Water Supply Volume and Water Service Area	Same as Case 3.	
	Accounted-for Water Volume	Same as Case 3.	
	Total Billing	Mean Water Sales Price was estimated at 222.6 FCFA/m ³ which was a weighted average of the water sales prices, a 10% reduced one for the kiosk user and the current ones for other subscribers, and their water supply volumes which were gained in the Water Demand Projection. Total billing was gained by the mean water sales price times Accounted-for Water Volume.	
	Utilization charge of the water service system	Same as Case 3.	
	Detailed items of Revenue and Expenditure	Same as Case 3.	



Graph A. Estimation of the Existing System



Graph B. Estimation of Groundwater Project



Graph C. Estimation of Integrated System (Groundwater & Existing Systems)

Figure 1 Analysis on Revenue / Expenditure and Supplied Water Volume

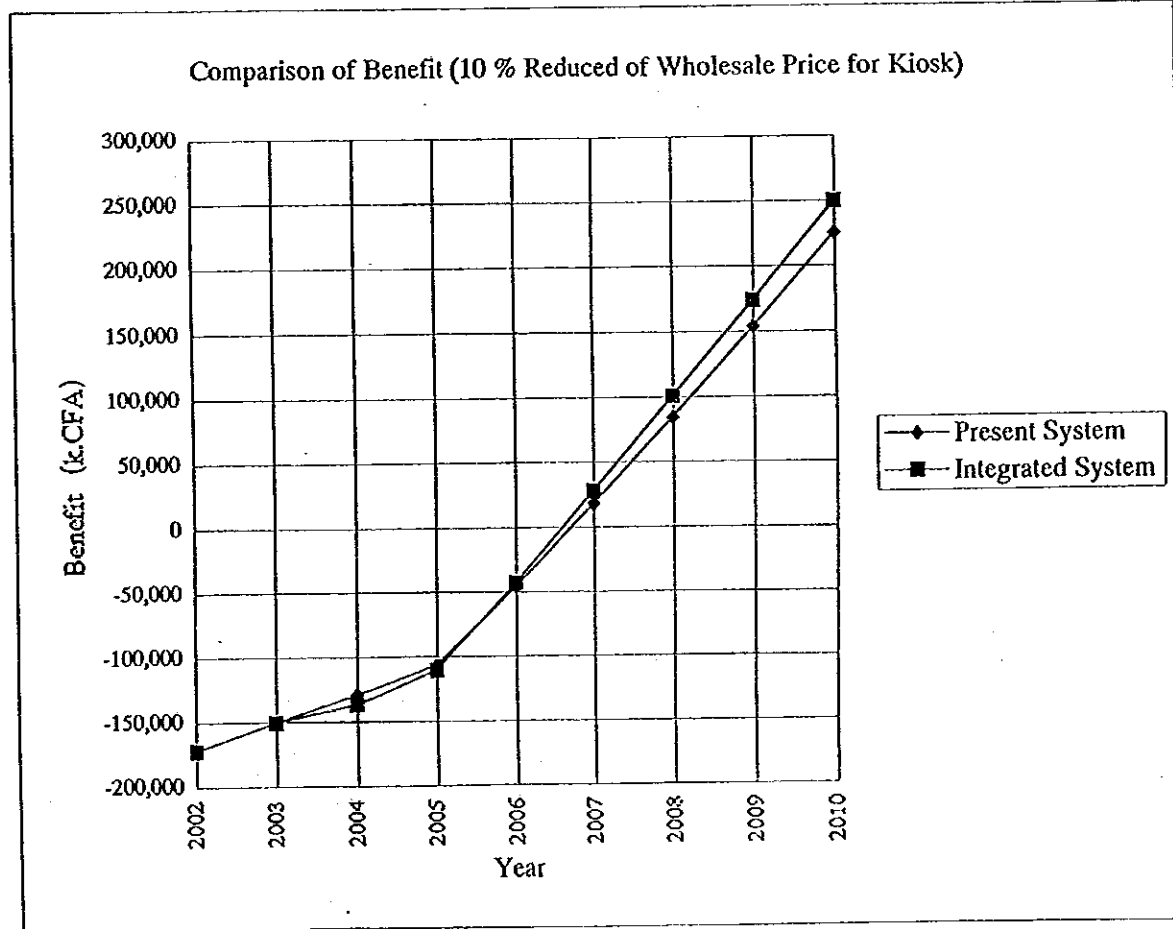
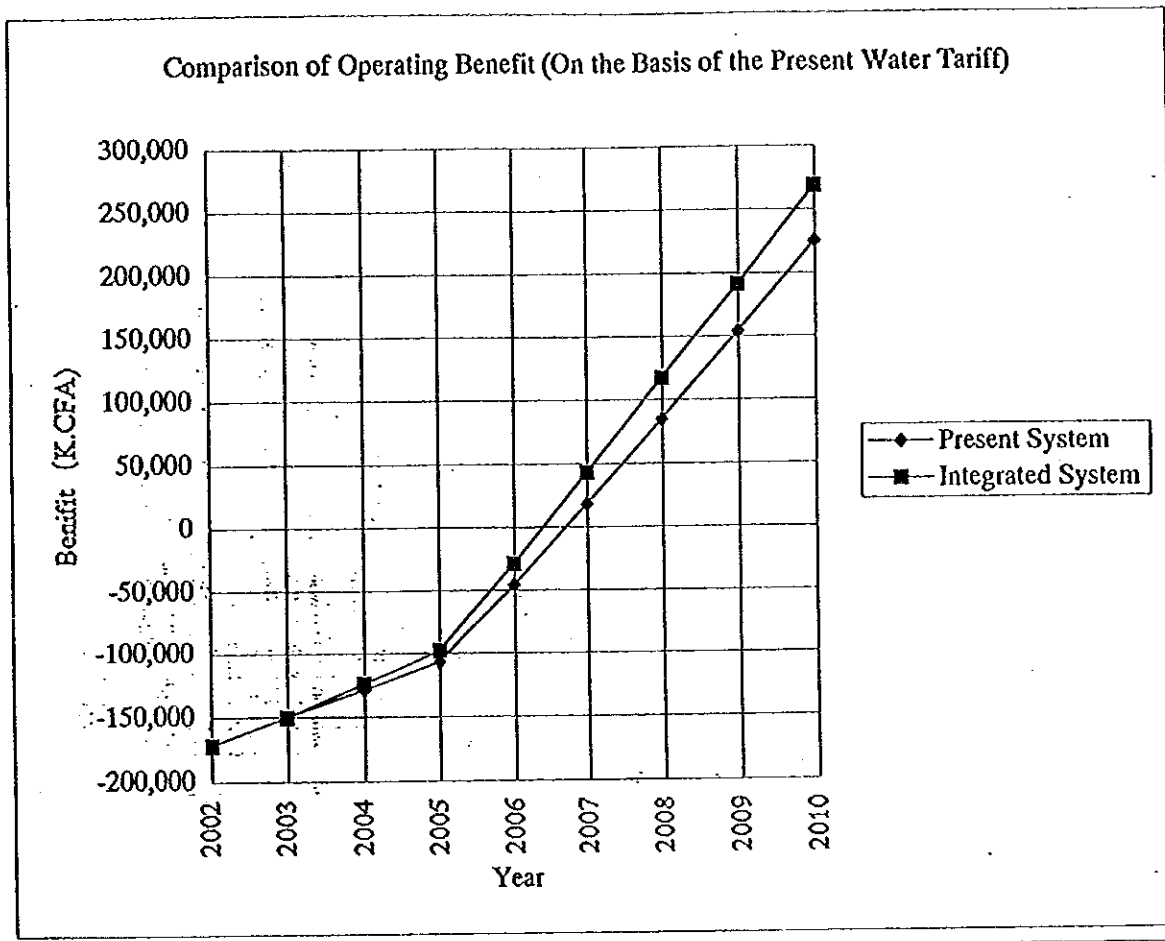
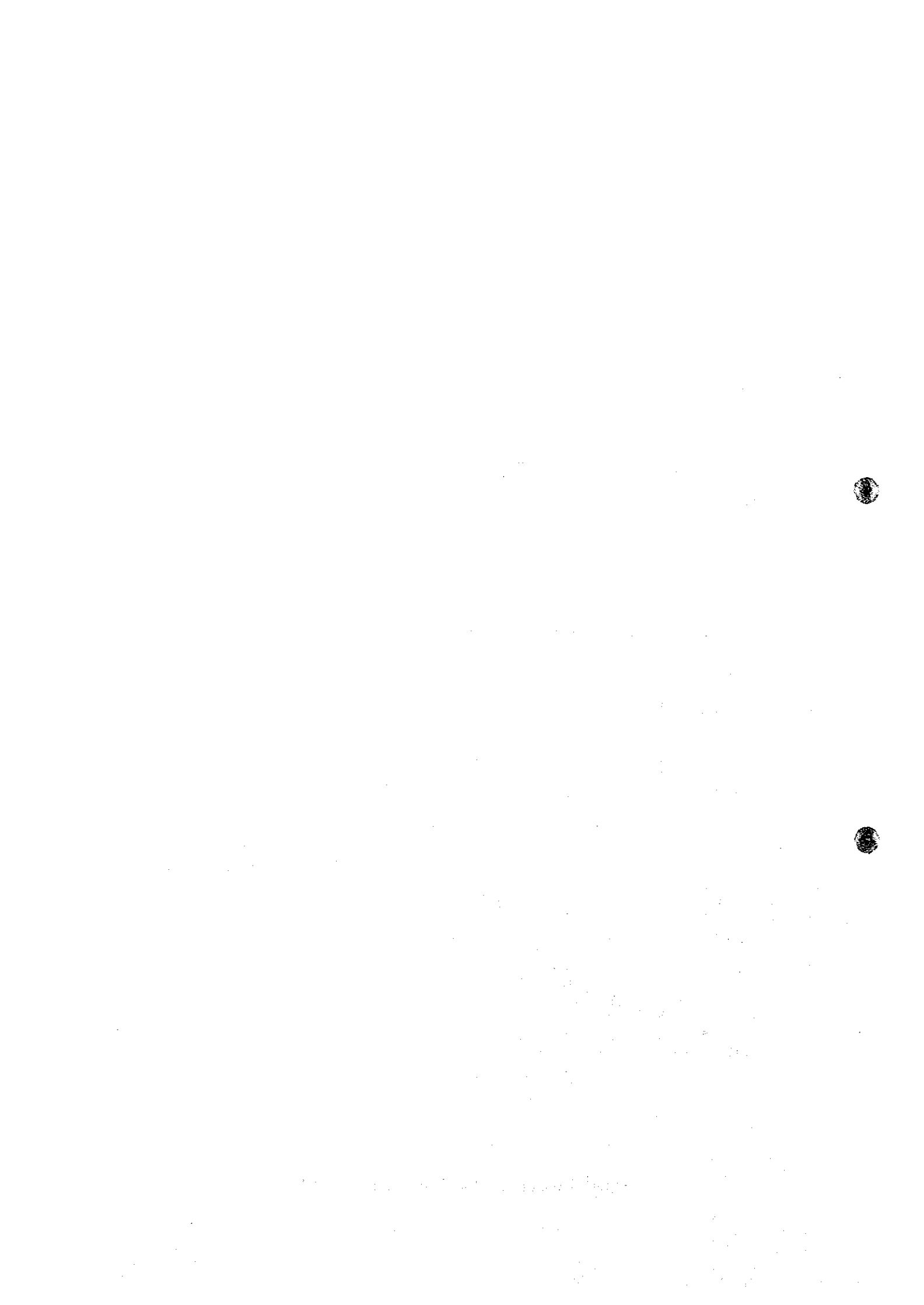


Figure 2 Water Tariff and Operating Benefit







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