

添付資料-8-3

各流域における事業費の積算

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	0.00	9.12	15.68	20.33	23.73	27.37
	L (m)	0	9,000	37,000	57,000	68,000	77,000
Dique	V (m3)	0	82,080	580,160	1,158,810	1,613,640	2,107,490
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	1,641,600	11,603,200	23,176,200	32,272,800	42,149,800
	A (m2)	0.000	0.990	1.430	1.305	1.705	2.145
	L (m)	0	9,000	37,000	57,000	68,000	77,000
Revestimiento	V (m3)	0	8,910	52,910	74,385	115,940	165,165
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	980,100	5,820,100	8,182,350	12,753,400	18,168,150
Sub-Total	Cost (S/.)	0	2,621,700	17,423,300	31,358,550	45,026,200	60,317,950
	Project Cost-A1	0	4,876,362	32,407,338	58,326,903	83,748,732	112,191,387
	Project Cost-B1	0	157,302	1,045,398	1,881,513	2,701,572	3,619,077
	Project Cost A&B1 (Total)	0	5,033,664	33,452,736	60,208,416	86,450,304	115,810,464
Target-2							
	A (m2)	8.03	12.88	14.25	20.33	27.27	37.52
	L (m)	1,000	7,000	12,000	17,000	18,000	18,000
Dique	V (m3)	8,030	90,160	171,000	345,610	490,860	675,360
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	160,600	1,803,200	3,420,000	6,912,200	9,817,200	13,507,200
	A (m2)	1.785	2.520	2.875	3.915	4.785	6.270
	L (m)	1,000	7,000	12,000	17,000	18,000	18,000
Revestimiento	V (m3)	1,785	17,640	34,500	66,555	86,130	112,860
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	196,350	1,940,400	3,795,000	7,321,050	9,474,300	12,414,600
Sub-Total	Cost (S/.)	356,950	3,743,600	7,215,000	14,233,250	19,291,500	25,921,800
	Project Cost-A2	663,927	6,963,096	13,419,900	26,473,845	35,882,190	48,214,548
	Project Cost-B2	21,417	224,616	432,900	853,995	1,157,490	1,555,308
	Project Cost A&B2 (Total)	685,344	7,187,712	13,852,800	27,327,840	37,039,680	49,769,856
Target-3							
	A (m2)	8.03	11.48	15.68	20.33	29.28	37.52
	L (m)	1,000	4,000	9,000	12,000	14,000	14,000
Dique	V (m3)	8,030	45,920	141,120	243,960	409,920	525,280
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	160,600	918,400	2,822,400	4,879,200	8,198,400	10,505,600
	A (m2)	1.785	2.520	3.250	3.915	5.610	6.650
	L (m)	1,000	4,000	9,000	12,000	14,000	14,000
Revestimiento	V (m3)	1,785	10,080	29,250	46,980	78,540	93,100
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	196,350	1,108,800	3,217,500	5,167,800	8,639,400	10,241,000
Sub-Total	Cost (S/.)	356,950	2,027,200	6,039,900	10,047,000	16,837,800	20,746,600
	Project Cost-A3	663,927	3,770,592	11,234,214	18,687,420	31,318,308	38,588,676
	Project Cost-B3	21,417	121,632	362,394	602,820	1,010,268	1,244,796
	Project Cost A&B3 (Total)	685,344	3,892,224	11,596,608	19,290,240	32,328,576	39,833,472
Target-1 for Chira							
	A (m2)	0.00	6.03	8.00	10.32	14.25	42.00
	L (m)	0	12,000	20,000	28,000	40,000	60,000
Dique	V (m3)	0	72,360	160,000	288,960	570,000	2,520,000
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	1,447,200	3,200,000	5,779,200	11,400,000	50,400,000
	A (m2)	0.000	0.855	1.300	0.990	1.875	5.000
	L (m)	0	12,000	20,000	28,000	40,000	60,000
Revestimiento	V (m3)	0	10,260	26,000	27,720	75,000	300,000
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	1,128,600	2,860,000	3,049,200	8,250,000	33,000,000
Sub-Total	Cost (S/.)	0	2,575,800	6,060,000	8,828,400	19,650,000	83,400,000
	Project Cost-A4	0	4,790,988	11,271,600	16,420,824	36,549,000	155,124,000
	Project Cost-B4	0	154,548	363,600	529,704	1,179,000	5,004,000
	Project Cost A&B4 (Total)	0	4,945,536	11,635,200	16,950,528	37,728,000	160,128,000
	Project Cost A&B12345 (Grand Total)	1,370,688	21,059,136	70,537,344	123,777,024	193,546,560	365,541,792
	Only Construction Cost	1,327,854	20,401,038	68,333,052	119,908,992	187,498,230	354,118,611
	Only Compensation Cost	42,834	658,098	2,204,292	3,868,032	6,048,330	11,423,181
	Total of Improvement Length (m)	2,000	32,000	78,000	114,000	140,000	169,000

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	8	12	12	15	20	20
	L (m)	720	720	720	720	720	720
Dique	V (m3)	5,846	8,986	8,986	10,886	14,062	14,062
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	116,928	179,712	179,712	217,728	281,232	281,232
	A (m2)	1,8	2,47	2,47	2,94	4,185	4,185
	L (m)	720	720	720	720	720	720
Revestimiento	V (m3)	1,296	1,778	1,778	2,117	3,013	3,013
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	142,560	195,624	195,624	232,848	331,452	331,452
Sub-Total	Cost (S/.)	259,488	375,336	375,336	450,576	612,684	612,684
	Project Cost-A1	482,648	698,125	698,125	838,071	1,139,592	1,139,592
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B1	15,569	22,520	22,520	27,035	36,761	36,761
	Project Cost A&B1 (Total)	498,217	720,645	720,645	865,106	1,176,353	1,176,353
Target-2							
	A (m2)	12	17	17	21	26	26
	L (m)	360	360	360	360	360	360
Dique	V (m3)	4,493	6,091	6,091	7,603	9,450	9,450
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	89,856	121,824	121,824	152,064	189,000	189,000
	A (m2)	1,17	1,885	1,885	3,04	5,075	5,775
	L (m)	360	360	360	360	360	360
Revestimiento	V (m3)	421	679	679	1,094	1,827	2,079
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	46,332	74,646	74,646	120,384	200,970	228,690
Sub-Total	Cost (S/.)	136,188	196,470	196,470	272,448	389,970	417,690
	Project Cost-A2	253,310	365,434	365,434	506,753	725,344	776,903
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B2	8,171	11,788	11,788	16,347	23,398	25,061
	Project Cost A&B2 (Total)	261,481	377,222	377,222	523,100	748,742	801,965
Target-3							
	A (m2)	3	5	5	7	9	10
	L (m)	360	360	360	720	720	720
Dique	V (m3)	1,109	1,847	1,847	4,990	6,458	7,258
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	22,176	36,936	36,936	99,792	129,168	145,152
	A (m2)	0,935	1,235	1,235	2,205	3,795	4,44
	L (m)	360	360	360	720	720	720
Revestimiento	V (m3)	337	445	445	1,588	2,732	3,197
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	37,026	48,906	48,906	174,636	300,564	351,648
Sub-Total	Cost (S/.)	59,202	85,842	85,842	274,428	429,732	496,800
	Project Cost-A3	110,116	159,666	159,666	510,436	799,302	924,048
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B3	3,552	5,151	5,151	16,466	25,784	29,808
	Project Cost A&B3 (Total)	113,668	164,817	164,817	526,902	825,085	953,856
Target-4							
Target-5							

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-6							
	A (m2)	12	18	18	21	24	33
	L (m)	360	360	360	360	360	360
Dique	V (m3)	4,493	6,480	6,480	7,603	8,813	11,761
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	89,856	129,600	129,600	152,064	176,256	235,224
	A (m2)	2.21	3.45	3.45	4.64	6.29	7.585
	L (m)	360	360	360	360	360	360
Revestimiento	V (m3)	796	1,242	1,242	1,670	2,264	2,731
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	87,516	136,620	136,620	183,744	249,084	300,366
Sub-Total	Cost (S/.)	177,372	266,220	266,220	335,808	425,340	535,590
	Project Cost-A6	329,912	495,169	495,169	624,603	791,132	996,197
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B6	10,642	15,973	15,973	20,148	25,520	32,135
	Project Cost A&B6 (Total)	340,554	511,142	511,142	644,751	816,653	1,028,333
	Project Cost A&B123456 (Grand Total)	1,213,920	1,773,827	1,773,827	2,559,859	3,566,834	3,960,507
	Only Construction Cost	1,175,985	1,718,394	1,718,394	2,479,864	3,455,370	3,836,741
	Lands & Houses	37,935	55,432	55,432	79,996	111,464	123,766

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-1							
Dique	A (m2)	0	0	0	20	33	76
	L (m)	0	0	0	4,000	6,000	8,000
	V (m3)	0	0	0	80,000	199,680	605,440
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	1,600,000	3,993,600	12,108,800
Revestimiento	A (m2)	0	0	0	1,925	2,31	2,97
	L (m)	0	0	0	4,000	6,000	8,000
	V (m3)	0	0	0	7,700	13,860	23,760
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	847,000	1,524,600	2,613,600
Sub-Total	Cost (S./.)	0	0	0	2,447,000	5,518,200	14,722,400
	Project Cost-A5-1	0	0	0	4,551,420	10,263,852	27,383,664
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-1	0	0	0	146,820	331,092	883,344
	Project Cost A&B5-1 (Total)	0	0	0	4,698,240	10,594,944	28,267,008
Target-5-2							
Dique	A (m2)	0	0	0	16	27	76
	L (m)	0	0	0	2,000	4,000	8,000
	V (m3)	0	0	0	32,560	107,520	605,440
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	651,200	2,150,400	12,108,800
Revestimiento	A (m2)	0	0	0	1,76	2,47	2,97
	L (m)	0	0	0	2,000	4,000	8,000
	V (m3)	0	0	0	3,520	9,880	23,760
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	387,200	1,086,800	2,613,600
Sub-Total	Cost (S./.)	0	0	0	1,038,400	3,237,200	14,722,400
	Project Cost-A5-2	0	0	0	1,931,424	6,021,192	27,383,664
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-2	0	0	0	62,304	194,232	883,344
	Project Cost A&B5-2 (Total)	0	0	0	1,993,728	6,215,424	28,267,008
Target-5-3							
Dique	A (m2)	0	0	0	0	0	6
	L (m)	0	0	0	0	0	4,000
	V (m3)	0	0	0	0	0	25,920
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	518,400
Revestimiento	A (m2)	0	0	0	0	0	1,43
	L (m)	0	0	0	0	0	4,000
	V (m3)	0	0	0	0	0	5,720
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	629,200
Sub-Total	Cost (S./.)	0	0	0	0	0	1,147,600
	Project Cost-A5-3	0	0	0	0	0	2,134,536
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-3	0	0	0	0	0	68,856
	Project Cost A&B5-3 (Total)	0	0	0	0	0	2,203,392

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-4							
Dique	A (m2)	0	0	0	5	9	12
	L (m)	0	0	0	0	2,000	8,000
	V (m3)	0	0	0	0	17,160	92,160
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	343,200	1,843,200
Revestimiento	A (m2)	0	0	0	0.9	1.265	1.69
	L (m)	0	0	0	0	2,000	8,000
	V (m3)	0	0	0	0	2,530	13,520
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	278,300	1,487,200
Sub-Total	Cost (S./.)	0	0	0	0	621,500	3,330,400
Project Cost-A5-4		0	0	0	0	1,155,990	6,194,544
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-4		0	0	0	0	37,290	199,824
Project Cost A&B5-4 (Total)		0	0	0	0	1,193,280	6,394,368
Target-5-5							
Dique	A (m2)	0	0	0	7	8	23
	L (m)	0	0	0	4,000	8,000	16,000
	V (m3)	0	0	0	29,120	64,960	360,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	582,400	1,299,200	7,200,000
Revestimiento	A (m2)	0	0	0	1.035	1.08	2.275
	L (m)	0	0	0	4,000	8,000	16,000
	V (m3)	0	0	0	4,140	8,640	36,400
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	455,400	950,400	4,004,000
Sub-Total	Cost (S./.)	0	0	0	1,037,800	2,249,600	11,204,000
Project Cost-A5-5		0	0	0	1,930,308	4,184,256	20,839,440
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-5		0	0	0	62,268	134,976	672,240
Project Cost A&B5-5 (Total)		0	0	0	1,992,576	4,319,232	21,511,680
Target-5-6							
Dique	A (m2)	0	0	0	0	6	12
	L (m)	0	0	0	0	2,000	8,000
	V (m3)	0	0	0	0	11,440	92,160
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	228,800	1,843,200
Revestimiento	A (m2)	0	0	0	0	0.945	1.17
	L (m)	0	0	0	0	2,000	8,000
	V (m3)	0	0	0	0	1,890	9,360
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	207,900	1,029,600
Sub-Total	Cost (S./.)	0	0	0	0	436,700	2,872,800
Project Cost-A5-6		0	0	0	0	812,262	5,343,408
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-6		0	0	0	0	26,202	172,368
Project Cost A&B5-6 (Total)		0	0	0	0	838,464	5,515,776

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-7							
	A (m2)	0	0	4	11	14	32
	L (m)	0	0	2,000	14,000	18,000	24,000
Dique	V (m3)	0	0	7,360	152,320	252,000	758,880
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	147,200	3,046,400	5,040,000	15,177,600
	A (m2)	0	0	0.81	1.215	1.65	2.665
	L (m)	0	0	2,000	14,000	18,000	24,000
Revestimiento	V (m3)	0	0	1,620	17,010	29,700	63,960
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	178,200	1,871,100	3,267,000	7,035,600
Sub-Total	Cost (S./.)	0	0	325,400	4,917,500	8,307,000	22,213,200
	Project Cost-A5-7	0	0	605,244	9,146,550	15,451,020	41,316,552
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-7	0	0	19,524	295,050	498,420	1,332,792
	Project Cost A&B5-7 (Total)	0	0	624,768	9,441,600	15,949,440	42,649,344
Target-5-8							
	A (m2)	0	0	0	0	5	12
	L (m)	0	0	0	0	2,000	6,000
Dique	V (m3)	0	0	0	0	10,000	69,120
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	200,000	1,382,400
	A (m2)	0	0	0	0	1.1	1.69
	L (m)	0	0	0	0	2,000	6,000
Revestimiento	V (m3)	0	0	0	0	2,200	10,140
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	242,000	1,115,400
Sub-Total	Cost (S./.)	0	0	0	0	442,000	2,497,800
	Project Cost-A5-8	0	0	0	0	822,120	4,645,908
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-8	0	0	0	0	26,520	149,868
	Project Cost A&B5-8 (Total)	0	0	0	0	848,640	4,795,776
Target-5-9							
	A (m2)	0	0	0	0	0	11
	L (m)	0	0	0	0	0	2,000
Dique	V (m3)	0	0	0	0	0	22,960
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	459,200
	A (m2)	0	0	0	0	0	2.52
	L (m)	0	0	0	0	0	2,000
Revestimiento	V (m3)	0	0	0	0	0	5,040
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	554,400
Sub-Total	Cost (S./.)	0	0	0	0	0	1,013,600
	Project Cost-A5-9	0	0	0	0	0	1,885,296
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5-9	0	0	0	0	0	60,816
	Project Cost A&B5-9 (Total)	0	0	0	0	0	1,946,112
	Project Cost A&B123456789 (Grand Total)	0	0	624,768	18,126,144	39,959,424	141,550,464
	Only Construction Cost	0	0	605,244	17,559,702	38,710,692	137,127,012
	Lands & Houses	0	0	19,524	566,442	1,248,732	4,423,452

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	19	22	24	26	28	30
	L (m)	130,000	158,000	164,000	178,000	182,000	186,000
Dique	V (m3)	2,453,100	3,512,340	3,936,000	4,597,740	5,045,040	5,518,620
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	49,062,000	70,246,800	78,720,000	91,954,800	100,900,800	110,372,400
	A (m2)	1,215	1,305	1,35	1,395	1,44	1,485
	L (m)	130,000	158,000	164,000	178,000	182,000	186,000
Revestimiento	V (m3)	157,950	206,190	221,400	248,310	262,080	276,210
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	17,374,500	22,680,900	24,354,000	27,314,100	28,828,800	30,383,100
Sub-Total	Cost (S./.)	66,436,500	92,927,700	103,074,000	119,268,900	129,729,600	140,755,500
	Project Cost-A1	123,571,890	172,845,522	191,717,640	221,840,154	241,297,056	261,805,230
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B1	3,986,190	5,575,662	6,184,440	7,156,134	7,783,776	8,445,330
	Project Cost A&B1 (Total)	127,558,080	178,421,184	197,902,080	228,996,288	249,080,832	270,250,560
Target-2							
	A (m2)	17	20	22	26	27	29
	L (m)	180,000	222,000	244,000	248,000	248,000	250,000
Dique	V (m3)	3,090,600	4,513,260	5,368,000	6,328,960	6,787,760	7,320,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	61,812,000	90,265,200	107,360,000	126,579,200	135,755,200	146,400,000
	A (m2)	1,215	1,305	1,35	1,44	1,485	1,53
	L (m)	180,000	222,000	244,000	248,000	248,000	250,000
Revestimiento	V (m3)	218,700	289,710	329,400	357,120	368,280	382,500
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	24,057,000	31,868,100	36,234,000	39,283,200	40,510,800	42,075,000
Sub-Total	Cost (S./.)	85,869,000	122,133,300	143,594,000	165,862,400	176,266,000	188,475,000
	Project Cost-A2	159,716,340	227,167,938	267,084,840	308,504,064	327,854,760	350,563,500
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	5,152,140	7,327,998	8,615,640	9,951,744	10,575,960	11,308,500
	Project Cost A&B2 (Total)	164,868,480	234,495,936	275,700,480	318,455,808	338,430,720	361,872,000
Target-3							
	A (m2)	0	8	9	9	10	10
	L (m)	42,000	56,000	56,000	68,000	72,000	80,000
Dique	V (m3)	0	449,680	510,720	620,160	739,440	821,600
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	8,993,600	10,214,400	12,403,200	14,788,800	16,432,000
	A (m2)	0	0,945	0,99	0,99	1,035	1,035
	L (m)	42,000	56,000	56,000	68,000	72,000	80,000
Revestimiento	V (m3)	0	52,920	55,440	67,320	74,520	82,800
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	5,821,200	6,098,400	7,405,200	8,197,200	9,108,000
Sub-Total	Cost (S./.)	0	14,814,800	16,312,800	19,808,400	22,986,000	25,540,000
	Project Cost-A3	0	27,555,528	30,341,808	36,843,624	42,753,960	47,504,400
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B3	0	888,888	978,768	1,188,504	1,379,160	1,532,400
	Project Cost A&B3 (Total)	0	28,444,416	31,320,576	38,032,128	44,133,120	49,036,800

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-4							
	A (m2)	17	17	30	32	36	38
	L (m)	18,000	40,000	64,000	100,000	100,000	102,000
Dique	V (m3)	311,040	691,200	1,914,880	3,197,000	3,625,000	3,924,960
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	6,220,800	13,824,000	38,297,600	63,940,000	72,500,000	78,499,200
	A (m2)	1.17	1.17	1.44	1.485	1.575	1.62
	L (m)	18,000	40,000	64,000	100,000	100,000	102,000
Revestimiento	V (m3)	21,060	46,800	92,160	148,500	157,500	165,240
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	2,316,600	5,148,000	10,137,600	16,335,000	17,325,000	18,176,400
Sub-Total	Cost (S./.)	8,537,400	18,972,000	48,435,200	80,275,000	89,825,000	96,675,600
	Project Cost-A4	15,879,564	35,287,920	90,089,472	149,311,500	167,074,500	179,816,616
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B4	512,244	1,138,320	2,906,112	4,816,500	5,389,500	5,800,536
	Project Cost A&B4 (Total)	16,391,808	36,426,240	92,995,584	154,128,000	172,464,000	185,617,152
Target-5							
	A (m2)	12	13	13	14	14	16
	L (m)	40,000	62,000	66,000	72,000	74,000	80,000
Dique	V (m3)	462,800	798,560	850,080	1,026,000	1,054,500	1,254,400
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	9,256,000	15,971,200	17,001,600	20,520,000	21,090,000	25,088,000
	A (m2)	1.035	1.08	1.08	1.125	1.125	1.17
	L (m)	40,000	62,000	66,000	72,000	74,000	80,000
Revestimiento	V (m3)	41,400	66,960	71,280	81,000	83,250	93,600
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	4,554,000	7,365,600	7,840,800	8,910,000	9,157,500	10,296,000
Sub-Total	Cost (S./.)	13,810,000	23,336,800	24,842,400	29,430,000	30,247,500	35,384,000
	Project Cost-A5	25,686,600	43,406,448	46,206,864	54,739,800	56,260,350	65,814,240
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5	828,600	1,400,208	1,490,544	1,765,800	1,814,850	2,123,040
	Project Cost A&B5 (Total)	26,515,200	44,806,656	47,697,408	56,505,600	58,075,200	67,937,280
	Project Cost A&B12345 (Grand Total)	335,333,568	522,594,432	645,616,128	796,117,824	862,183,872	934,713,792
	Only Construction Cost	324,854,394	506,263,356	625,440,624	771,239,142	835,240,626	905,503,986
	Lands & Houses	10,479,174	16,331,076	20,175,504	24,878,682	26,943,246	29,209,806

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	0	5	5	6	10	10
	L (m)	0	5,760	8,640	11,520	19,200	21,120
Dique	V (m3)	0	28,800	43,200	65,894	182,784	201,062
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	576,000	864,000	1,317,888	3,655,680	4,021,248
	A (m2)	0	0.9	0.9	0.945	1.32	1.56
	L (m)	0	5,760	8,640	11,520	19,200	21,120
Revestimiento	V (m3)	0	5,184	7,776	10,886	25,344	32,947
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	570,240	855,360	1,197,504	2,787,840	3,624,192
Sub-Total	Cost (S./.)	0	1,146,240	1,719,360	2,515,392	6,443,520	7,645,440
	Project Cost-A1	0	2,132,006	3,198,010	4,678,629	11,984,947	14,220,518
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B1	0	68,774	103,162	150,924	386,611	458,726
	Project Cost A&B1 (Total)	0	2,200,781	3,301,171	4,829,553	12,371,558	14,679,245
Target-2							
	A (m2)	12	26	26	27	30	43
	L (m)	51,840	52,800	52,800	52,800	52,800	52,800
Dique	V (m3)	615,859	1,347,456	1,347,456	1,425,600	1,588,224	2,247,696
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	12,317,184	26,949,120	26,949,120	28,512,000	31,764,480	44,953,920
	A (m2)	1.26	1.755	1.755	1.8	1.89	1.935
	L (m)	51,840	52,800	52,800	52,800	52,800	52,800
Revestimiento	V (m3)	65,318	92,664	92,664	95,040	99,792	102,168
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	7,185,024	10,193,040	10,193,040	10,454,400	10,977,120	11,238,480
Sub-Total	Cost (S./.)	19,502,208	37,142,160	37,142,160	38,966,400	42,741,600	56,192,400
	Project Cost-A2	36,274,107	69,084,418	69,084,418	72,477,504	79,499,376	104,517,864
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	1,170,132	2,228,530	2,228,530	2,337,984	2,564,496	3,371,544
	Project Cost A&B2 (Total)	37,444,239	71,312,947	71,312,947	74,815,488	82,063,872	107,889,408
Target-3							
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Dique	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	0
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Revestimiento	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	0
Sub-Total	Cost (S./.)	0	0	0	0	0	0
	Project Cost-A3	0	0	0	0	0	0
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B3	0	0	0	0	0	0
	Project Cost A&B3 (Total)	0	0	0	0	0	0

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-4							
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Dique	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	0	0	0	0	0
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Revestimiento	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	0	0	0	0	0
Sub-Total	Cost (S/.)	0	0	0	0	0	0
	Project Cost-A4	0	0	0	0	0	0
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B4	0	0	0	0	0	0
	Project Cost A&B4 (Total)	0	0	0	0	0	0
	Project Cost A&B12345 (Grand Total)	37,444,239	73,513,728	74,614,118	79,645,041	94,435,430	122,568,653
	Only Construction Cost	36,274,107	71,216,424	72,282,427	77,156,133	91,484,323	118,738,382
	Lands & Houses	1,170,132	2,297,304	2,331,691	2,488,908	2,951,107	3,830,270

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	5	5	27	67	92	105
	L (m)	7,680	7,680	26,880	36,480	38,400	42,240
Dique	V (m3)	38,400	38,400	722,534	2,437,958	3,518,592	4,455,053
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	768,000	768,000	14,450,688	48,759,168	70,371,840	89,101,056
	A (m2)	0.9	0.9	1.71	3.315	3.835	5.355
	L (m)	7,680	7,680	26,880	36,480	38,400	42,240
Revestimiento	V (m3)	6,912	6,912	45,965	120,931	147,264	226,195
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	760,320	760,320	5,056,128	13,302,432	16,199,040	24,881,472
Sub-Total	Cost (S./.)	1,528,320	1,528,320	19,506,816	62,061,600	86,570,880	113,982,528
	Project Cost-A1	2,842,675	2,842,675	36,282,678	115,434,576	161,021,837	212,007,502
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B1	91,699	91,699	1,170,409	3,723,696	5,194,253	6,838,952
	Project Cost A&B1 (Total)	2,934,374	2,934,374	37,453,087	119,158,272	166,216,090	218,846,454
Target-2							
	A (m2)	0	0	16.28	36	44.88	49.68
	L (m)	0	0	12,000	16,000	18,000	21,000
Dique	V (m3)	0	0	195,360	576,000	807,840	1,043,280
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	3,907,200	11,520,000	16,156,800	20,865,600
	A (m2)	0	0	1.44	1.8	1.98	2.07
	L (m)	0	0	12,000	16,000	18,000	21,000
Revestimiento	V (m3)	0	0	17,280	28,800	35,640	43,470
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	1,900,800	3,168,000	3,920,400	4,781,700
Sub-Total	Cost (S./.)	0	0	5,808,000	14,688,000	20,077,200	25,647,300
	Project Cost-A2	0	0	10,802,880	27,319,680	37,343,592	47,703,978
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	0	0	348,480	881,280	1,204,632	1,538,838
	Project Cost A&B2 (Total)	0	0	11,151,360	28,200,960	38,548,224	49,242,816
Target-3							
	A (m2)	0	0	10	19	30	30
	L (m)	0	0	14,400	30,720	35,520	37,440
Dique	V (m3)	0	0	142,848	575,078	1,064,534	1,122,077
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	2,856,960	11,501,568	21,290,688	22,441,536
	A (m2)	0	0	1.170	1.530	2.035	2.035
	L (m)	0	0	14,400	30,720	35,520	37,440
Revestimiento	V (m3)	0	0	16,848	47,002	72,283	76,190
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	1,853,280	5,170,176	7,951,152	8,380,944
Sub-Total	Cost (S./.)	0	0	4,710,240	16,671,744	29,241,840	30,822,480
	Project Cost-A3	0	0	8,761,046	31,009,444	54,389,822	57,329,813
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B3	0	0	282,614	1,000,305	1,754,510	1,849,349
	Project Cost A&B3 (Total)	0	0	9,043,661	32,009,748	56,144,333	59,179,162

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-4							
Dique	A (m2)	0	0	17	43	64	64
	L (m)	0	0	31,680	45,120	49,920	52,800
	V (m3)	0	0	553,766	1,920,758	3,194,880	3,379,200
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	11,075,328	38,415,168	63,897,600	67,584,000
Revestimiento	A (m2)	0.000	0.000	1.485	1.935	2.250	2.250
	L (m)	0	0	31,680	45,120	49,920	52,800
	V (m3)	0	0	47,045	87,307	112,320	118,800
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	5,174,928	9,603,792	12,355,200	13,068,000
Sub-Total	Cost (S./.)	0	0	16,250,256	48,018,960	76,252,800	80,652,000
	Project Cost-A4	0	0	30,225,476	89,315,266	141,830,208	150,012,720
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B4	0	0	975,015	2,881,138	4,575,168	4,839,120
	Project Cost A&B4 (Total)	0	0	31,200,492	92,196,403	146,405,376	154,851,840
Target-5							
Dique	A (m2)	0	0	8	16	21	36
	L (m)	0	0	6,000	10,000	12,000	14,000
	V (m3)	0	0	48,720	162,800	255,840	504,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	974,400	3,256,000	5,116,800	10,080,000
Revestimiento	A (m2)	0.000	0.000	1.080	1.440	1.620	1.800
	L (m)	0	0	6,000	10,000	12,000	14,000
	V (m3)	0	0	6,480	14,400	19,440	25,200
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	712,800	1,584,000	2,138,400	2,772,000
Sub-Total	Cost (S./.)	0	0	1,687,200	4,840,000	7,255,200	12,852,000
	Project Cost-A5	0	0	3,138,192	9,002,400	13,494,672	23,904,720
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5	0	0	101,232	290,400	435,312	771,120
	Project Cost A&B5 (Total)	0	0	3,239,424	9,292,800	13,929,984	24,675,840
Target-6							
Dique	A (m2)	4	4	13	24	32	36
	L (m)	4,000	4,000	16,000	32,000	36,000	42,000
	V (m3)	17,280	17,280	206,720	783,360	1,149,120	1,512,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	345,600	345,600	4,134,400	15,667,200	22,982,400	30,240,000
Revestimiento	A (m2)	1	1	1	2	2	3
	L (m)	4,000	4,000	16,000	32,000	36,000	42,000
	V (m3)	3,420	3,420	20,880	59,840	88,920	109,200
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	376,200	376,200	2,296,800	6,582,400	9,781,200	12,012,000
Sub-Total	Cost (S./.)	721,800	721,800	6,431,200	22,249,600	32,763,600	42,252,000
	Project Cost-A6	1,342,548	1,342,548	11,962,032	41,384,256	60,940,296	78,588,720
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B6	43,308	43,308	385,872	1,334,976	1,965,816	2,535,120
	Project Cost A&B6 (Total)	1,385,856	1,385,856	12,347,904	42,719,232	62,906,112	81,123,840
	Project Cost A&B123456 (Grand Total)	4,320,230	4,320,230	104,435,927	323,577,416	484,150,118	587,919,951
	Only Construction Cost	4,185,223	4,185,223	101,172,304	313,465,621	469,020,427	569,547,453
	Lands & Houses	135,007	135,007	3,263,623	10,111,794	15,129,691	18,372,498

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	0	7	8	12	21	31
	L (m)	0	1,000	4,000	12,000	20,000	22,000
Dique	V (m3)	0	6,820	30,720	138,240	413,600	689,040
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	136,400	614,400	2,764,800	8,272,000	13,780,800
	A (m2)	0	0,945	0,99	1,17	1,44	1,755
	L (m)	0	1,000	4,000	12,000	20,000	22,000
Revestimiento	V (m3)	0	945	3,960	14,040	28,800	38,610
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	103,950	435,600	1,544,400	3,168,000	4,247,100
Sub-Total	Cost (S/.)	0	240,350	1,050,000	4,309,200	11,440,000	18,027,900
	Project Cost-A1	0	447,051	1,953,000	8,015,112	21,278,400	33,531,894
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B1	0	14,421	63,000	258,552	686,400	1,081,674
	Project Cost A&B1 (Total)	0	461,472	2,016,000	8,273,664	21,964,800	34,613,568
	Project Cost A&B1 (Grand Total)	0	461,472	2,016,000	8,273,664	21,964,800	34,613,568
	Only Construction Cost	0	447,051	1,953,000	8,015,112	21,278,400	33,531,894
	Lands & Houses	0	14,421	63,000	258,552	686,400	1,081,674

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	0	0	4	4	5	5
	L (m)	0	0	600	1,200	2,000	4,000
Dique	V (m3)	0	0	2,142	4,284	10,260	20,520
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	0	42,840	85,680	205,200	410,400
	A (m2)	0	0	1,955	2,125	2,945	3,325
	L (m)	0	0	600	1,200	2,000	4,000
Revestimiento	V (m3)	0	0	1,173	2,550	5,890	13,300
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	0	129,030	280,500	647,900	1,463,000
Sub-Total	Cost (S/.)	0	0	171,870	366,180	853,100	1,873,400
	Project Cost-A1	0	0	319,678	681,095	1,586,766	3,484,524
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B1	0	0	10,312	21,971	51,186	112,404
	Project Cost A&B1 (Total)	0	0	329,990	703,066	1,637,952	3,596,928
	Project Cost A&B1 (Grand Total)	0	0	329,990	703,066	1,637,952	3,596,928
	Only Construction Cost	0	0	319,678	681,095	1,586,766	3,484,524
	Lands & Houses	0	0	10,312	21,971	51,186	112,404

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	4.32	4.32	5.13	8.03	8.03	9.12
	L (m)	1,000	2,000	4,000	6,000	8,000	8,000
Dique	V (m3)	4,320	8,640	20,520	48,180	64,240	72,960
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	86,400	172,800	410,400	963,600	1,284,800	1,459,200
	A (m2)	1.235	1.425	1.425	1.575	1.785	1.870
	L (m)	1,000	2,000	4,000	6,000	8,000	8,000
Revestimiento	V (m3)	1,235	2,850	5,700	9,450	14,280	14,960
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	135,850	313,500	627,000	1,039,500	1,570,800	1,645,600
Sub-Total	Cost (S/.)	222,250	486,300	1,037,400	2,003,100	2,855,600	3,104,800
	Project Cost-A1	413,385	904,518	1,929,564	3,725,766	5,311,416	5,774,928
	Project Cost-B1	13335	29178	62244	120186	171336	186288
	Project Cost A&B1 (Total)	426,720	933,696	1,991,808	3,845,952	5,482,752	5,961,216
Target-2							
	A (m2)	6.82	8.03	10.27	12.75	14.08	22.00
	L (m)	4,000	16,000	32,000	50,000	62,000	70,000
Dique	V (m3)	27,280	128,480	328,640	637,500	872,960	1,540,000
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	545,600	2,569,600	6,572,800	12,750,000	17,459,200	30,800,000
	A (m2)	1.575	1.575	1.955	2.375	2.470	3.150
	L (m)	4,000	16,000	32,000	50,000	62,000	70,000
Revestimiento	V (m3)	6,300	25,200	62,560	118,750	153,140	220,500
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	693,000	2,772,000	6,881,600	13,062,500	16,845,400	24,255,000
Sub-Total	Cost (S/.)	1,238,600	5,341,600	13,454,400	25,812,500	34,304,600	55,055,000
	Project Cost-A2	2,303,796	9,935,376	25,025,184	48,011,250	63,806,556	102,402,300
	Project Cost-B2	74316	320496	807264	1548750	2058276	3303300
	Project Cost A&B2 (Total)	2,378,112	10,255,872	25,832,448	49,560,000	65,864,832	105,705,600
Target-3							
	A (m2)	6.82	9.12	11.48	16.92	20.00	25.07
	L (m)	2,000	8,000	12,000	18,000	24,000	28,000
Dique	V (m3)	13,640	72,960	137,760	304,560	480,000	701,960
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	272,800	1,459,200	2,755,200	6,091,200	9,600,000	14,039,200
	A (m2)	0.945	0.990	1.080	1.540	1.650	1.815
	L (m)	2,000	8,000	12,000	18,000	24,000	28,000
Revestimiento	V (m3)	1,890	7,920	12,960	27,720	39,600	50,820
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	207,900	871,200	1,425,600	3,049,200	4,356,000	5,590,200
Sub-Total	Cost (S/.)	480,700	2,330,400	4,180,800	9,140,400	13,956,000	19,629,400
	Project Cost-A3	894,102	4,334,544	7,776,288	17,001,144	25,958,160	36,510,684
	Project Cost-B3	28842	139824	250848	548424	837360	1177764
	Project Cost A&B3 (Total)	922,944	4,474,368	8,027,136	17,549,568	26,795,520	37,688,448
	Project Cost A&B1234 (Grand Total)	3,727,776	15,663,936	35,851,392	70,955,520	98,143,104	149,355,264
	Only Construction Cost	3,611,283	15,174,438	34,731,036	68,738,160	95,076,132	144,687,912
	Only Compensation Cost	116,493	489,498	1,120,356	2,217,360	3,066,972	4,667,352
		3.73	15.66	35.85	70.96	98.14	149.36

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	22	31	35	46	60	65
	L (m)	35,000	35,000	36,000	36,000	36,000	36,000
Dique	V (m3)	757,050	1,073,800	1,249,920	1,651,320	2,144,520	2,344,680
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	15,141,000	21,476,000	24,998,400	33,026,400	42,890,400	46,893,600
	A (m2)	1,395	1,62	1,71	1,935	2,115	2,205
	L (m)	35,000	35,000	36,000	36,000	36,000	36,000
Revestimiento	V (m3)	48,825	56,700	61,560	69,660	76,140	79,380
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	5,370,750	6,237,000	6,771,600	7,662,600	8,375,400	8,731,800
Sub-Total	Cost (S/.)	20,511,750	27,713,000	31,770,000	40,689,000	51,265,800	55,625,400
	Project Cost-A1	38,151,855	51,546,180	59,092,200	75,681,540	95,354,388	103,463,244
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B1	1,230,705	1,662,780	1,906,200	2,441,340	3,075,948	3,337,524
	Project Cost A&B1 (Total)	39,382,560	53,208,960	60,998,400	78,122,880	98,430,336	106,800,768
	Project Cost A&B1 (Grand Total)	39,382,560	53,208,960	60,998,400	78,122,880	98,430,336	106,800,768
	Only Construction Cost	38,151,855	51,546,180	59,092,200	75,681,540	95,354,388	103,463,244
	Lands & Houses	1,230,705	1,662,780	1,906,200	2,441,340	3,075,948	3,337,524

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1							
	A (m2)	11	44	48	53	64	76
	L (m)	24,000	36,000	38,000	40,000	42,000	44,000
Dique	V (m3)	261,120	1,566,720	1,834,640	2,131,200	2,688,000	3,329,920
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	5,222,400	31,334,400	36,692,800	42,624,000	53,760,000	66,598,400
	A (m2)	1.215	1.89	1.98	2.07	2.25	2.43
	L (m)	24,000	36,000	38,000	40,000	42,000	44,000
Revestimiento	V (m3)	29,160	68,040	75,240	82,800	94,500	106,920
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	3,207,600	7,484,400	8,276,400	9,108,000	10,395,000	11,761,200
Sub-Total	Cost (S./.)	8,430,000	38,818,800	44,969,200	51,732,000	64,155,000	78,359,600
	Project Cost-A1	15,679,800	72,202,968	83,642,712	96,221,520	119,328,300	145,748,856
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B1	505,800	2,329,128	2,698,152	3,103,920	3,849,300	4,701,576
	Project Cost A&B1 (Total)	16,185,600	74,532,096	86,340,864	99,325,440	123,177,600	150,450,432
Target-2							
	A (m2)	3	5	6	6	8	11
	L (m)	6,000	7,000	7,000	8,000	8,000	8,000
Dique	V (m3)	18,480	35,000	40,040	45,760	64,960	87,040
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	369,600	700,000	800,800	915,200	1,299,200	1,740,800
	A (m2)	0.765	0.9	0.945	0.945	1.08	1.215
	L (m)	6,000	7,000	7,000	8,000	8,000	8,000
Revestimiento	V (m3)	4,590	6,300	6,615	7,560	8,640	9,720
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	504,900	693,000	727,650	831,600	950,400	1,069,200
Sub-Total	Cost (S./.)	874,500	1,393,000	1,528,450	1,746,800	2,249,600	2,810,000
	Project Cost-A2	1,626,570	2,590,980	2,842,917	3,249,048	4,184,256	5,226,600
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	52,470	83,580	91,707	104,808	134,976	168,600
	Project Cost A&B2 (Total)	1,679,040	2,674,560	2,934,624	3,353,856	4,319,232	5,395,200
Target-3							
	A (m2)	7	12	12	16	20	24
	L (m)	8,000	16,000	24,000	28,000	30,000	30,000
Dique	V (m3)	58,240	190,080	285,120	455,840	600,000	722,400
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	1,164,800	3,801,600	5,702,400	9,116,800	12,000,000	14,448,000
	A (m2)	1.035	1.26	1.26	1.44	1.575	1.71
	L (m)	8,000	16,000	24,000	28,000	30,000	30,000
Revestimiento	V (m3)	8,280	20,160	30,240	40,320	47,250	51,300
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	910,800	2,217,600	3,326,400	4,435,200	5,197,500	5,643,000
Sub-Total	Cost (S./.)	2,075,600	6,019,200	9,028,800	13,552,000	17,197,500	20,091,000
	Project Cost-A3	3,860,616	11,195,712	16,793,568	25,206,720	31,987,350	37,369,260
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B3	124,536	361,152	541,728	813,120	1,031,850	1,205,460
	Project Cost A&B3 (Total)	3,985,152	11,556,864	17,335,296	26,019,840	33,019,200	38,574,720

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-4							
	A (m2)	12	20	21	24	27	32
	L (m)	6,000	14,000	30,000	36,000	38,000	40,000
Dique	V (m3)	69,120	276,920	633,600	861,120	1,021,440	1,264,800
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	1,382,400	5,538,400	12,672,000	17,222,400	20,428,800	25,296,000
	A (m2)	1.17	1.573	1.53	1.62	1.71	1.845
	L (m)	6,000	14,000	30,000	36,000	38,000	40,000
Revestimiento	V (m3)	7,020	22,022	45,900	58,320	64,980	73,800
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	772,200	2,422,420	5,049,000	6,415,200	7,147,800	8,118,000
Sub-Total	Cost (S./.)	2,154,600	7,960,820	17,721,000	23,637,600	27,576,600	33,414,000
	Project Cost-A4	4,007,556	14,807,125	32,961,060	43,965,936	51,292,476	62,150,040
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B4	129,276	477,649	1,063,260	1,418,256	1,654,596	2,004,840
	Project Cost A&B4 (Total)	4,136,832	15,284,774	34,024,320	45,384,192	52,947,072	64,154,880
Target-5							
	A (m2)	6	12	12	14	19	28
	L (m)	4,000	6,000	6,000	6,000	6,000	6,000
Dique	V (m3)	25,920	71,280	71,280	84,000	112,320	170,520
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	518,400	1,425,600	1,425,600	1,680,000	2,246,400	3,410,400
	A (m2)	0.99	1.26	1.26	1.35	1.53	1.755
	L (m)	4,000	6,000	6,000	6,000	6,000	6,000
Revestimiento	V (m3)	3,960	7,560	7,560	8,100	9,180	10,530
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	435,600	831,600	831,600	891,000	1,009,800	1,158,300
Sub-Total	Cost (S./.)	954,000	2,257,200	2,257,200	2,571,000	3,256,200	4,568,700
	Project Cost-A5	1,774,440	4,198,392	4,198,392	4,782,060	6,056,532	8,497,782
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5	57,240	135,432	135,432	154,260	195,372	274,122
	Project Cost A&B5 (Total)	1,831,680	4,333,824	4,333,824	4,936,320	6,251,904	8,771,904
	Project Cost A&B12345 (Grand Total)	27,818,304	108,382,118	144,968,928	179,019,648	219,715,008	267,347,136
	Only Construction Cost	26,948,982	104,995,177	140,438,649	173,425,284	212,848,914	258,992,538
	Lands & Houses	869,322	3,386,941	4,530,279	5,594,364	6,866,094	8,354,598

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Retarding Basin	Required A1 (m2)	0	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Retarding Basin-1	Required V (M m3)	0.0	50.0	50.0	50.0	50.0	50.0
	Necessary H (m)	#DIV/0!	5.0	5.0	5.0	5.0	5.0
	L1 (m)	0	9,487	9,487	9,487	9,487	9,487
	V1 (m3)	0	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Excavation	Rate (S/. /m3)	10	10	10	10	10	10
	Cost (S./.)	0	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	A (m2)	44	44	44	44	44	44
	L (m)	0	9,487	9,487	9,487	9,487	9,487
Dique	V (m3)	0	417,421	417,421	417,421	417,421	417,421
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	0	8,348,413	8,348,413	8,348,413	8,348,413	8,348,413
	A (m2)	2.25	2.25	2.25	2.25	2.25	2.25
	L (m)	0	9,487	9,487	9,487	9,487	9,487
Revestimiento	V (m3)	0	21,345	21,345	21,345	21,345	21,345
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	0	2,347,991	2,347,991	2,347,991	2,347,991	2,347,991
Sub-Total	Cost (S./.)	0	110,696,404	110,696,404	110,696,404	110,696,404	110,696,404
	Project Cost-RB	0	205,895,312	205,895,312	205,895,312	205,895,312	205,895,312
Land Acquisition	A (m2)	0	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Rural	Rate (S/. /m2)	10	10	10	10	10	10
	Cost (S./.)	0	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	Nos.	0	0	0	0	0	0
House Relocation	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-RB_Comp	0	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	Project Cost A&B1 (Total)	0	305,895,312	305,895,312	305,895,312	305,895,312	305,895,312
Target-1	A (m2)	0.00	0.00	9.12	15.68	20.33	23.73
	L (m)	0	0	9,000	37,000	57,000	68,000
Dique	V (m3)	0	0	82,080	580,160	1,158,810	1,613,640
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	1,641,600	11,603,200	23,176,200	32,272,800
	A (m2)	0.000	0.000	0.990	1.430	1.305	1.705
	L (m)	0	0	9,000	37,000	57,000	68,000
Revestimiento	V (m3)	0	0	8,910	52,910	74,385	115,940
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	980,100	5,820,100	8,182,350	12,753,400
Sub-Total	Cost (S./.)	0	0	2,621,700	17,423,300	31,358,550	45,026,200
	Project Cost-A1	0	0	4,876,362	32,407,338	58,326,903	83,748,732
	Project Cost-B1	0	0	157,302	1,045,398	1,881,513	2,701,572
	Project Cost A&B1 (Total)	0	0	5,033,664	33,452,736	60,208,416	86,450,304
Target-2	A (m2)	8.03	12.88	14.25	20.33	27.27	37.52
	L (m)	1,000	7,000	12,000	17,000	18,000	18,000
Dique	V (m3)	8,030	90,160	171,000	345,610	490,860	675,360
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	160,600	1,803,200	3,420,000	6,912,200	9,817,200	13,507,200
	A (m2)	1.785	2.520	2.875	3.915	4.785	6.270
	L (m)	1,000	7,000	12,000	17,000	18,000	18,000
Revestimiento	V (m3)	1,785	17,640	34,500	66,555	86,130	112,860
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	196,350	1,940,400	3,795,000	7,321,050	9,474,300	12,414,600
Sub-Total	Cost (S./.)	356,950	3,743,600	7,215,000	14,233,250	19,291,500	25,921,800
	Project Cost-A2	663,927	6,963,096	13,419,900	26,473,845	35,882,190	48,214,548
	Project Cost-B2	21,417	224,616	432,900	853,995	1,157,490	1,555,308
	Project Cost A&B2 (Total)	685,344	7,187,712	13,852,800	27,327,840	37,039,680	49,769,856
Target-3	A (m2)	8.03	11.48	15.68	20.33	29.28	37.52
	L (m)	1,000	4,000	9,000	12,000	14,000	14,000
Dique	V (m3)	8,030	45,920	141,120	243,960	409,920	525,280
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S./.)	160,600	918,400	2,822,400	4,879,200	8,198,400	10,505,600
	A (m2)	1.785	2.520	3.250	3.915	5.610	6.650
	L (m)	1,000	4,000	9,000	12,000	14,000	14,000
Revestimiento	V (m3)	1,785	10,080	29,250	46,980	78,540	93,100
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S./.)	196,350	1,108,800	3,217,500	5,167,800	8,639,400	10,241,000
Sub-Total	Cost (S./.)	356,950	2,027,200	6,039,900	10,047,000	16,837,800	20,746,600
	Project Cost-A3	663,927	3,770,592	11,234,214	18,687,420	31,318,308	38,588,676
	Project Cost-B3	21,417	121,632	362,394	602,820	1,010,268	1,244,796
	Project Cost A&B3 (Total)	685,344	3,892,224	11,596,608	19,290,240	32,328,576	39,833,472
Change of Dam Operation (Chira River)	Required Reservoir	0.0	30.0	30.0	30.0	30.0	30.0
	Required V (m3)	0	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000
	Unit Cost (S./.)	10	10	10	10	10	10
Sub-Total	Cost (S./.)	0	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
	Project Cost-CDO	0	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
	Project Cost-RB_Comp	0	0	0	0	0	0
	Project Cost A&B1 (Total)	0	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
Target-1 for Chira	A (m2)	0.00	6.03	8.00	10.32	14.25	42.00
	L (m)	0	0	12,000	20,000	28,000	40,000
Dique	V (m3)	0	0	96,000	206,400	399,000	1,680,000

	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	0	1,920,000	4,128,000	7,980,000	33,600,000
	A (m2)	0.000	0.855	1.300	0.990	1.875	5.000
	L (m)	0	0	12,000	20,000	28,000	40,000
Revestimiento	V (m3)	0	0	15,600	19,800	52,500	200,000
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	0	1,716,000	2,178,000	5,775,000	22,000,000
Sub-Total	Cost (S/.)	0	0	3,636,000	6,306,000	13,755,000	55,600,000
	Project Cost-A4	0	0	6,762,960	11,729,160	25,584,300	103,416,000
	Project Cost-B4	0	0	218,160	378,360	825,300	3,336,000
	Project Cost A&B4 (Total)	0	0	6,981,120	12,107,520	26,409,600	106,752,000
	Project Cost A&B12345 (Grand Total)	1,370,688	616,975,248	643,359,504	698,073,648	761,881,584	888,700,944
	Only Construction Cost	1,327,854	516,629,000	542,188,748	595,193,075	657,007,013	779,863,268
	Only Compensation Cost	42,834	100,346,248	101,170,756	102,880,573	104,874,571	108,837,676
	RB Const	0	205,895,312	205,895,312	205,895,312	205,895,312	205,895,312
	RB Comp	0	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	Change of Dam Operation	0	300,000,000	300,000,000	300,000,000	300,000,000	300,000,000
	River Improvement Work	1,327,854	10,733,688	36,293,436	89,297,763	151,111,701	273,967,956
	River Improvement Compensation	42,834	346,248	1,170,756	2,880,573	4,874,571	8,837,676
	Total of Improvement Length (m)	2,000	11,000	42,000	86,000	117,000	140,000

遊水地必要Volume 必要Volume低減		12 60%	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Item of Cost	Description							
Retarding Basin								
	Required A1 (m2)		0	0	2,450,000	2,450,000	2,450,000	2,450,000
	Required V (M m3)		0	0	7	7	7	7
Retarding Basin-1	Necessary H (m)		0,0	0,0	3,0	3,0	3,0	3,0
	L1 (m)		0	0	15,200	15,200	15,200	15,200
	V1 (m3)		0	0	2,420,000	2,420,000	2,420,000	2,420,000
Excavation	Rate (S././m3)		10	10	10	10	10	10
	Cost (S./.)		0	0	24,200,000	24,200,000	24,200,000	24,200,000
	A (m2)		44	44	44	44	44	44
	L (m)		0	0	15,200	15,200	15,200	15,200
Dique	V (m3)		0	0	668,800	668,800	668,800	668,800
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		0	0	13,376,000	13,376,000	13,376,000	13,376,000
	A (m2)		2,25	2,25	2,25	2,25	2,25	2,25
	L (m)		0	0	15,200	15,200	15,200	15,200
Revestimiento	V (m3)		0	0	34,200	34,200	34,200	34,200
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		0	0	3,762,000	3,762,000	3,762,000	3,762,000
Sub-Total	Cost (S./.)		0	0	41,338,000	41,338,000	41,338,000	41,338,000
	Project Cost-RB		0	0	76,888,680	76,888,680	76,888,680	76,888,680
Land Acquisition Residential	A (m2)							
	Rate (S././m2)		700	700	700	700	700	700
	Cost (S./.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)				2,450,000	2,450,000	2,450,000	2,450,000
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.							
	Rate (S././house)		70000	70000	70000	70000	70000	70000
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B1		0	0	2,480,280	2,480,280	2,480,280	2,480,280
	Project Cost A&B1 (Total)		0	0	79,368,960	79,368,960	79,368,960	79,368,960
Target-5-1								
	A (m2)		0	0	0	0	20	33
	L (m)		0	0	0	0	4,000	6,000
Dique	V (m3)		0	0	0	0	80,000	199,680
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		0	0	0	0	1,600,000	3,993,600
	A (m2)		0	0	0	0	1,925	2,31
	L (m)		0	0	0	0	4,000	6,000
Revestimiento	V (m3)		0	0	0	0	7,700	13,860
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		0	0	0	0	847,000	1,524,600
Sub-Total	Cost (S./.)		0	0	0	0	2,447,000	5,518,200
	Project Cost-A5-1		0	0	0	0	4,551,420	10,263,852
Land Acquisition Residential	A (m2)							
	Rate (S././m2)		700	700	700	700	700	700
	Cost (S./.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)							
	Rate (S././m2)		50	50	50	50	50	50
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.							
	Rate (S././house)		70000	70000	70000	70000	70000	70000
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B5-1		0	0	0	0	146,820	331,092
	Project Cost A&B5-1 (Total)		0	0	0	0	4,698,240	10,594,944
Target-5-2								
	A (m2)		0	0	0	0	16	27
	L (m)		0	0	0	0	2,000	4,000
Dique	V (m3)		0	0	0	0	32,560	107,520
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		0	0	0	0	651,200	2,150,400
	A (m2)		0	0	0	0	1,76	2,47
	L (m)		0	0	0	0	2,000	4,000
Revestimiento	V (m3)		0	0	0	0	3,520	9,880
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		0	0	0	0	387,200	1,086,800
Sub-Total	Cost (S./.)		0	0	0	0	1,038,400	3,237,200
	Project Cost-A5-2		0	0	0	0	1,931,424	6,021,192
Land Acquisition Residential	A (m2)							
	Rate (S././m2)		700	700	700	700	700	700
	Cost (S./.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)							
	Rate (S././m2)		50	50	50	50	50	50
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.							
	Rate (S././house)		70000	70000	70000	70000	70000	70000
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B5-2		0	0	0	0	62,304	194,232
	Project Cost A&B5-2 (Total)		0	0	0	0	1,993,728	6,215,424

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-3							
Dique	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	0
Revestimiento	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	0
Sub-Total	Cost (S./.)	0	0	0	0	0	0
Project Cost-A5-3		0	0	0	0	0	0
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-3		0	0	0	0	0	0
Project Cost A&B5-3 (Total)		0	0	0	0	0	0
Target-5-4							
Dique	A (m2)	0	0	0	0	5	9
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	17,160
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	343,200
Revestimiento	A (m2)	0	0	0	0	0,9	1,265
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	2,530
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	278,300
Sub-Total	Cost (S./.)	0	0	0	0	0	621,500
Project Cost-A5-4		0	0	0	0	0	1,155,990
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-4		0	0	0	0	0	37,290
Project Cost A&B5-4 (Total)		0	0	0	0	0	1,193,280
Target-5-5							
Dique	A (m2)	0	0	0	0	7	8
	L (m)	0	0	0	0	4,000	8,000
	V (m3)	0	0	0	0	29,120	64,960
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	582,400	1,299,200
Revestimiento	A (m2)	0	0	0	0	1,035	1,08
	L (m)	0	0	0	0	4,000	8,000
	V (m3)	0	0	0	0	4,140	8,640
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	455,400	950,400
Sub-Total	Cost (S./.)	0	0	0	0	1,037,800	2,249,600
Project Cost-A5-5		0	0	0	0	1,930,308	4,184,256
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-5		0	0	0	0	62,268	134,976
Project Cost A&B5-5 (Total)		0	0	0	0	1,992,576	4,319,232

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-6							
Dique	A (m2)	0	0	0	0	0	6
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	11,440
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	228,800
Revestimiento	A (m2)	0	0	0	0	0	0.945
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	1,890
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	207,900
Sub-Total	Cost (S./.)	0	0	0	0	0	436,700
Project Cost-A5-6		0	0	0	0	0	812,262
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-6		0	0	0	0	0	26,202
Project Cost A&B5-6 (Total)		0	0	0	0	0	838,464
Target-5-7							
Dique	A (m2)	0	0	0	4	11	14
	L (m)	0	0	0	2,000	14,000	18,000
	V (m3)	0	0	0	7,360	152,320	252,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	147,200	3,046,400	5,040,000
Revestimiento	A (m2)	0	0	0	0.81	1.215	1.65
	L (m)	0	0	0	2,000	14,000	18,000
	V (m3)	0	0	0	1,620	17,010	29,700
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	178,200	1,871,100	3,267,000
Sub-Total	Cost (S./.)	0	0	0	325,400	4,917,500	8,307,000
Project Cost-A5-7		0	0	0	605,244	9,146,550	15,451,020
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-7		0	0	0	19,524	295,050	498,420
Project Cost A&B5-7 (Total)		0	0	0	624,768	9,441,600	15,949,440
Target-5-8							
Dique	A (m2)	0	0	0	0	0	5
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	10,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	200,000
Revestimiento	A (m2)	0	0	0	0	0	1.1
	L (m)	0	0	0	0	0	2,000
	V (m3)	0	0	0	0	0	2,200
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	242,000
Sub-Total	Cost (S./.)	0	0	0	0	0	442,000
Project Cost-A5-8		0	0	0	0	0	822,120
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
Project Cost-B5-8		0	0	0	0	0	26,520
Project Cost A&B5-8 (Total)		0	0	0	0	0	848,640

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5-9							
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Dique	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	0	0	0	0	0
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Revestimiento	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	0	0	0	0	0
Sub-Total	Cost (S/.)	0	0	0	0	0	0
	Project Cost-A5-9	0	0	0	0	0	0
Land Acquisition Residential	A (m2)						
	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S/. /house)	70000	70000	70000	70000	70000	70000
	Cost (S/.)	0	0	0	0	0	0
	Project Cost-B5-9	0	0	0	0	0	0
	Project Cost A&B5-9 (Total)	0	0	0	0	0	0
	Project Cost A&B123456789 (Grand Total)	0	0	79,368,960	79,993,728	97,495,104	119,328,384
	Only Construction Cost	0	0	76,888,680	77,493,924	94,448,382	115,599,372
	Lands & Houses	0	0	2,480,280	2,499,804	3,046,722	3,729,012

遊水地必要Volume 必要Volume低減 Item of Cost		298 60%	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Retarding Basin	Required A1 (m2)		0	0	59,520,000	59,520,000	59,520,000	59,520,000
Retarding Basin-1	Required V (M m3)		0	0	179	179	179	179
	Necessary H (m)		0.0	0.0	3.0	3.0	3.0	3.0
	L1 (m)		0	0	7,715	7,715	7,715	7,715
	V1 (m3)		0	0	59,520,000	59,520,000	59,520,000	59,520,000
Excavation	Rate (S/. /m3)		10	10	10	10	10	10
	Cost (S/.)		0	0	595,200,000	595,200,000	595,200,000	595,200,000
	A (m2)		44	44	44	44	44	44
	L (m)		0	0	30,860	30,860	30,860	30,860
Dique	V (m3)		0	0	1,357,826	1,357,826	1,357,826	1,357,826
	Rate (S/. /m3)		20	20	20	20	20	20
	Cost (S/.)		0	0	27,156,521	27,156,521	27,156,521	27,156,521
	A (m2)		2.25	2.25	2.25	2.25	2.25	2.25
	L (m)		0	0	30,860	30,860	30,860	30,860
Revestimiento	V (m3)		0	0	69,434	69,434	69,434	69,434
	Rate (S/. /m3)		110	110	110	110	110	110
	Cost (S/.)		0	0	7,637,771	7,637,771	7,637,771	7,637,771
Sub-Total	Cost (S/.)		0	0	629,994,292	629,994,292	629,994,292	629,994,292
	Project Cost-RB1		0	0	1,171,789,383	1,171,789,383	1,171,789,383	1,171,789,383
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)		0	0	59,520,000	59,520,000	59,520,000	59,520,000
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S/. /house)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
	Project Cost-RB1		0	0	37,799,658	37,799,658	37,799,658	37,799,658
	Project Cost RA&RB1 (Total)		0	0	1,209,589,041	1,209,589,041	1,209,589,041	1,209,589,041
Target-1	A (m2)		19	22	22	24	26	28
	L (m)		130,000	158,000	158,000	164,000	178,000	182,000
Dique	V (m3)		2,453,100	3,512,340	3,512,340	3,936,000	4,597,740	5,045,040
	Rate (S/. /m3)		20	20	20	20	20	20
	Cost (S/.)		49,062,000	70,246,800	70,246,800	78,720,000	91,954,800	100,900,800
	A (m2)		1.215	1.305	1.305	1.35	1.395	1.44
	L (m)		130,000	158,000	158,000	164,000	178,000	182,000
Revestimiento	V (m3)		157,950	206,190	206,190	221,400	248,310	262,080
	Rate (S/. /m3)		110	110	110	110	110	110
	Cost (S/.)		17,374,500	22,680,900	22,680,900	24,354,000	27,314,100	28,828,800
Sub-Total	Cost (S/.)		66,436,500	92,927,700	92,927,700	103,074,000	119,268,900	129,729,600
	Project Cost-A1		123,571,890	172,845,522	172,845,522	191,717,640	221,840,154	241,297,056
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)		50	50	50	50	50	50
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S/. /house)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
	Project Cost-B1		3,986,190	5,575,662	5,575,662	6,184,440	7,156,134	7,783,776
	Project Cost A&B1 (Total)		127,558,080	178,421,184	178,421,184	197,902,080	228,996,288	249,080,832
Target-2	A (m2)		17	20	20	22	26	27
	L (m)		180,000	222,000	222,000	244,000	248,000	248,000
Dique	V (m3)		3,090,600	4,513,260	4,513,260	5,368,000	6,328,960	6,787,760
	Rate (S/. /m3)		20	20	20	20	20	20
	Cost (S/.)		61,812,000	90,265,200	90,265,200	107,360,000	126,579,200	135,755,200
	A (m2)		1.215	1.305	1.305	1.35	1.44	1.485
	L (m)		180,000	222,000	222,000	244,000	248,000	248,000
Revestimiento	V (m3)		218,700	289,710	289,710	329,400	357,120	368,280
	Rate (S/. /m3)		110	110	110	110	110	110
	Cost (S/.)		24,057,000	31,868,100	31,868,100	36,234,000	39,283,200	40,510,800
Sub-Total	Cost (S/.)		85,869,000	122,133,300	122,133,300	143,594,000	165,862,400	176,266,000
	Project Cost-A2		159,716,340	227,167,938	227,167,938	267,084,840	308,504,064	327,854,760
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)		50	50	50	50	50	50
	Rate (S/. /m2)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S/. /house)		0	0	0	0	0	0
	Cost (S/.)		0	0	0	0	0	0
	Project Cost-B2		5,152,140	7,327,998	7,327,998	8,615,640	9,951,744	10,575,960
	Project Cost A&B2 (Total)		164,868,480	234,495,936	234,495,936	275,700,480	318,455,808	338,430,720

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-3							
	A (m2)	0	8	8	9	9	10
	L (m)	42,000	56,000	56,000	56,000	68,000	72,000
Dique	V (m3)	0	449,680	449,680	510,720	620,160	739,440
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	8,993,600	8,993,600	10,214,400	12,403,200	14,788,800
	A (m2)	0	0.945	0.945	0.99	0.99	1.035
	L (m)	42,000	56,000	56,000	56,000	68,000	72,000
Revestimiento	V (m3)	0	52,920	52,920	55,440	67,320	74,520
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	5,821,200	5,821,200	6,098,400	7,405,200	8,197,200
Sub-Total	Cost (S./.)	0	14,814,800	14,814,800	16,312,800	19,808,400	22,986,000
	Project Cost-A3	0	27,555,528	27,555,528	30,341,808	36,843,624	42,753,960
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B3	0	888,888	888,888	978,768	1,188,504	1,379,160
	Project Cost A&B3 (Total)	0	28,444,416	28,444,416	31,320,576	38,032,128	44,133,120
Target-4							
	A (m2)	17	17	17	30	32	36
	L (m)	18,000	40,000	40,000	64,000	100,000	100,000
Dique	V (m3)	311,040	691,200	691,200	1,914,880	3,197,000	3,625,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	6,220,800	13,824,000	13,824,000	38,297,600	63,940,000	72,500,000
	A (m2)	1.17	1.17	1.17	1.44	1.485	1.575
	L (m)	18,000	40,000	40,000	64,000	100,000	100,000
Revestimiento	V (m3)	21,060	46,800	46,800	92,160	148,500	157,500
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	2,316,600	5,148,000	5,148,000	10,137,600	16,335,000	17,325,000
Sub-Total	Cost (S./.)	8,537,400	18,972,000	18,972,000	48,435,200	80,275,000	89,825,000
	Project Cost-A4	15,879,564	35,287,920	35,287,920	90,089,472	149,311,500	167,074,500
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B4	512,244	1,138,320	1,138,320	2,906,112	4,816,500	5,389,500
	Project Cost A&B4 (Total)	16,391,808	36,426,240	36,426,240	92,995,584	154,128,000	172,464,000
Target-5							
	A (m2)	12	13	13	13	14	14
	L (m)	40,000	62,000	62,000	66,000	72,000	74,000
Dique	V (m3)	462,800	798,560	798,560	850,080	1,026,000	1,054,500
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	9,256,000	15,971,200	15,971,200	17,001,600	20,520,000	21,090,000
	A (m2)	1.035	1.08	1.08	1.08	1.125	1.125
	L (m)	40,000	62,000	62,000	66,000	72,000	74,000
Revestimiento	V (m3)	41,400	66,960	66,960	71,280	81,000	83,250
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	4,554,000	7,365,600	7,365,600	7,840,800	8,910,000	9,157,500
Sub-Total	Cost (S./.)	13,810,000	23,336,800	23,336,800	24,842,400	29,430,000	30,247,500
	Project Cost-A5	25,686,600	43,406,448	43,406,448	46,206,864	54,739,800	56,260,350
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5	828,600	1,400,208	1,400,208	1,490,544	1,765,800	1,814,850
	Project Cost A&B5 (Total)	26,515,200	44,806,656	44,806,656	47,697,408	56,505,600	58,075,200
	Project Cost A&B12345 (Grand Total)	335,333,568	522,594,432	1,732,183,473	1,855,205,169	2,005,706,865	2,071,772,913
	Only Construction Cost	324,854,394	506,263,356	1,678,052,739	1,797,230,007	1,943,028,525	2,007,030,009
	Lands & Houses	10,479,174	16,331,076	54,130,734	57,975,162	62,678,340	64,742,904

Dam必要Volume 必要Volume20%増		4.4	120%	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Item of Cost	Description								
Change of Dam Operation									
Required Volume by (Million m3)				0	0	5.28	5.28	5.28	5.28
Dam or Retarding Basin				10	10	10	10	10	10
Unit Rate S./m3				0	0	52,800,000	52,800,000	52,800,000	52,800,000
Cost				0	0	52,800,000	52,800,000	52,800,000	52,800,000
Target-1									
A (m2)				0	5	5	5	6	10
L (m)				0	5,760	5,760	8,640	11,520	19,200
V (m3)				0	28,800	28,800	43,200	65,894	182,784
Rate (S./m3)				20	20	20	20	20	20
Cost (S./.)				0	576,000	576,000	864,000	1,317,888	3,655,680
A (m2)				0	0.9	0.9	0.9	0.945	1.32
L (m)				0	5,760	5,760	8,640	11,520	19,200
V (m3)				0	5,184	5,184	7,776	10,886	25,344
Rate (S./m3)				110	110	110	110	110	110
Cost (S./.)				0	570,240	570,240	855,360	1,197,504	2,787,840
Sub-Total				0	1,146,240	1,146,240	1,719,360	2,515,392	6,443,520
Project Cost-A1				0	2,132,006	2,132,006	3,198,010	4,678,629	11,984,947
Land Acquisition Residential									
A (m2)									
Rate (S./m2)				700	700	700	700	700	700
Cost (S./.)				0	0	0	0	0	0
Land Acquisition Rural									
A (m2)									
Rate (S./m2)				50	50	50	50	50	50
Cost (S./.)				0	0	0	0	0	0
House Relocation									
Nos.									
Rate (S./house)				70000	70000	70000	70000	70000	70000
Cost (S./.)				0	0	0	0	0	0
Project Cost-B1				0	68,774	68,774	103,162	150,924	386,611
Project Cost A&B1 (Total)				0	2,200,781	2,200,781	3,301,171	4,829,553	12,371,558
Target-2									
A (m2)				12	26	26	26	27	30
L (m)				51,840	52,800	52,800	52,800	52,800	52,800
V (m3)				615,859	1,347,456	1,347,456	1,347,456	1,425,600	1,588,224
Rate (S./m3)				20	20	20	20	20	20
Cost (S./.)				12,317,184	26,949,120	26,949,120	26,949,120	28,512,000	31,764,480
A (m2)				1.26	1.755	1.755	1.755	1.8	1.89
L (m)				51,840	52,800	52,800	52,800	52,800	52,800
V (m3)				65,318	92,664	92,664	92,664	95,040	99,792
Rate (S./m3)				110	110	110	110	110	110
Cost (S./.)				7,185,024	10,193,040	10,193,040	10,193,040	10,454,400	10,977,120
Sub-Total				19,502,208	37,142,160	37,142,160	37,142,160	38,966,400	42,741,600
Project Cost-A2				36,274,107	69,084,418	69,084,418	69,084,418	72,477,504	79,499,376
Land Acquisition Residential									
A (m2)									
Rate (S./m2)				700	700	700	700	700	700
Cost (S./.)				0	0	0	0	0	0
Land Acquisition Rural									
A (m2)									
Rate (S./m2)				50	50	50	50	50	50
Cost (S./.)				0	0	0	0	0	0
House Relocation									
Nos.									
Rate (S./house)				70000	70000	70000	70000	70000	70000
Cost (S./.)				0	0	0	0	0	0
Project Cost-B2				1,170,132	2,228,530	2,228,530	2,228,530	2,337,984	2,564,496
Project Cost A&B2 (Total)				37,444,239	71,312,947	71,312,947	71,312,947	74,815,488	82,063,872
Target-3									
A (m2)				0	0	0	0	0	0
L (m)				0	0	0	0	0	0
V (m3)				0	0	0	0	0	0
Rate (S./m3)				20	20	20	20	20	20
Cost (S./.)				0	0	0	0	0	0
A (m2)				0	0	0	0	0	0
L (m)				0	0	0	0	0	0
V (m3)				0	0	0	0	0	0
Rate (S./m3)				110	110	110	110	110	110
Cost (S./.)				0	0	0	0	0	0
Sub-Total				0	0	0	0	0	0
Project Cost-A3				0	0	0	0	0	0
Land Acquisition Residential									
A (m2)									
Rate (S./m2)				700	700	700	700	700	700
Cost (S./.)				0	0	0	0	0	0
Land Acquisition Rural									
A (m2)									
Rate (S./m2)				50	50	50	50	50	50
Cost (S./.)				0	0	0	0	0	0
House Relocation									
Nos.									
Rate (S./house)				70000	70000	70000	70000	70000	70000
Cost (S./.)				0	0	0	0	0	0
Project Cost-B3				0	0	0	0	0	0
Project Cost A&B3 (Total)				0	0	0	0	0	0

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-4							
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Dique	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	0	0	0
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Revestimiento	V (m3)	0	0	0	0	0	0
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	0	0	0
Sub-Total	Cost (S./.)	0	0	0	0	0	0
	Project Cost=A4	0	0	0	0	0	0
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost=B4	0	0	0	0	0	0
	Project Cost A&B4 (Total)	0	0	0	0	0	0
	Project Cost A&B12345 (Grand Total)	37,444,239	73,513,728	126,313,728	127,414,118	132,445,041	147,235,430
	Only Construction Cost	36,274,107	71,216,424	71,216,424	72,282,427	77,156,133	91,484,323
	Change of Dam Operation	0	0	52,800,000	52,800,000	52,800,000	52,800,000
	Lands & Houses	1,170,132	2,297,304	2,297,304	2,331,691	2,488,908	2,951,107

遊水地必要Volume 必要Volume低減 Item of Cost	Description	34 60%	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Retarding Basin	Required A1 (m2)		0	0	6,800,000	6,800,000	6,800,000	6,800,000
Retarding Basin-1	Required V (M m3)		0	0	20.4	20.4	20.4	20.4
	Necessary H (m)		0.0	0.0	3.0	3.0	3.0	3.0
	L1 (m)		0	0	2,608	2,608	2,608	2,608
Excavation	V1 (m3)		0	0	6,800,000	6,800,000	6,800,000	6,800,000
	Rate (S././m3)		10	10	10	10	10	10
	Cost (S./.)		0	0	68,000,000	68,000,000	68,000,000	68,000,000
	A (m2)		44	44	44	44	44	44
	L (m)		0	0	10,431	10,431	10,431	10,431
Dique	V (m3)		0	0	458,952	458,952	458,952	458,952
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		0	0	9,179,037	9,179,037	9,179,037	9,179,037
	A (m2)		2.25	2.25	2.25	2.25	2.25	2.25
	L (m)		0	0	10,431	10,431	10,431	10,431
Revestimiento	V (m3)		0	0	23,469	23,469	23,469	23,469
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		0	0	2,581,604	2,581,604	2,581,604	2,581,604
Sub-Total	Cost (S./.)		0	0	79,760,641	79,760,641	79,760,641	79,760,641
	Project Cost-RB		0	0	148,354,793	148,354,793	148,354,793	148,354,793
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	6,800,000	6,800,000	6,800,000	6,800,000
Land Acquisition Rural	A (m2)		0	0	0	0	0	0
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S././house)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B1		0	0	4,785,638	4,785,638	4,785,638	4,785,638
	Project Cost A&B1 (Total)		0	0	153,140,431	153,140,431	153,140,431	153,140,431
Target-1	A (m2)		5	5	5	27	67	92
	L (m)		7,680	7,680	7,680	26,880	36,480	38,400
Dique	V (m3)		38,400	38,400	38,400	722,534	2,437,958	3,518,592
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		768,000	768,000	768,000	14,450,688	48,759,168	70,371,840
	A (m2)		0.9	0.9	0.9	1.71	3.315	3.835
	L (m)		7,680	7,680	7,680	26,880	36,480	38,400
Revestimiento	V (m3)		6,912	6,912	6,912	45,965	120,931	147,264
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		760,320	760,320	760,320	5,056,128	13,302,432	16,199,040
Sub-Total	Cost (S./.)		1,528,320	1,528,320	1,528,320	19,506,816	62,061,600	86,570,880
	Project Cost-A1		2,842,675	2,842,675	2,842,675	36,282,678	115,434,576	161,021,837
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)		50	50	50	50	50	50
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S././house)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B1		91,699	91,699	91,699	1,170,409	3,723,696	5,194,253
	Project Cost A&B1 (Total)		2,934,374	2,934,374	2,934,374	37,453,087	119,158,272	166,216,090
Target-2	A (m2)		0	0	0	16.28	36	44.88
	L (m)		0	0	0	12,000	16,000	18,000
Dique	V (m3)		0	0	0	195,360	576,000	807,840
	Rate (S././m3)		20	20	20	20	20	20
	Cost (S./.)		0	0	0	3,907,200	11,520,000	16,156,800
	A (m2)		0	0	0	1.44	1.8	1.98
	L (m)		0	0	0	12,000	16,000	18,000
Revestimiento	V (m3)		0	0	0	17,280	28,800	35,640
	Rate (S././m3)		110	110	110	110	110	110
	Cost (S./.)		0	0	0	1,900,800	3,168,000	3,920,400
Sub-Total	Cost (S./.)		0	0	0	5,808,000	14,688,000	20,077,200
	Project Cost-A2		0	0	0	10,802,880	27,319,680	37,343,592
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)		50	50	50	50	50	50
	Rate (S././m2)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S././house)		0	0	0	0	0	0
	Cost (S./.)		0	0	0	0	0	0
	Project Cost-B2		0	0	0	348,480	881,280	1,204,632
	Project Cost A&B2 (Total)		0	0	0	11,151,360	28,200,960	38,548,224

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-3							
	A (m2)	0	0	0	10	19	30
	L (m)	0	0	0	14,400	30,720	35,520
Dique	V (m3)	0	0	0	142,848	575,078	1,064,534
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	2,856,960	11,501,568	21,290,688
	A (m2)	0	0	0	1,170	1,530	2,035
	L (m)	0	0	0	14,400	30,720	35,520
Revestimiento	V (m3)	0	0	0	16,848	47,002	72,283
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	1,853,280	5,170,176	7,951,152
Sub-Total	Cost (S./.)	0	0	0	4,710,240	16,671,744	29,241,840
	Project Cost=A3	0	0	0	8,761,046	31,009,444	54,389,822
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost=B3	0	0	0	282,614	1,000,305	1,754,510
	Project Cost A&B3 (Total)	0	0	0	9,043,661	32,009,748	56,144,333
Target-4							
	A (m2)	0	0	0	17	43	64
	L (m)	0	0	0	31,680	45,120	49,920
Dique	V (m3)	0	0	0	553,766	1,920,758	3,194,880
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	11,075,328	38,415,168	63,897,600
	A (m2)	0.000	0.000	0.000	1,485	1,935	2,250
	L (m)	0	0	0	31,680	45,120	49,920
Revestimiento	V (m3)	0	0	0	47,045	87,307	112,320
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	5,174,928	9,603,792	12,355,200
Sub-Total	Cost (S./.)	0	0	0	16,250,256	48,018,960	76,252,800
	Project Cost=A4	0	0	0	30,225,476	89,315,266	141,830,208
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost=B4	0	0	0	975,015	2,881,138	4,575,168
	Project Cost A&B4 (Total)	0	0	0	31,200,492	92,196,403	146,405,376
Target-5							
	A (m2)	0	0	0	8	16	21
	L (m)	0	0	0	6,000	10,000	12,000
Dique	V (m3)	0	0	0	48,720	162,800	255,840
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	0	0	0	974,400	3,256,000	5,116,800
	A (m2)	0.000	0.000	0.000	1,080	1,440	1,620
	L (m)	0	0	0	6,000	10,000	12,000
Revestimiento	V (m3)	0	0	0	6,480	14,400	19,440
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	0	0	0	712,800	1,584,000	2,138,400
Sub-Total	Cost (S./.)	0	0	0	1,687,200	4,840,000	7,255,200
	Project Cost=A5	0	0	0	3,138,192	9,002,400	13,494,672
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost=B5	0	0	0	101,232	290,400	435,312
	Project Cost A&B5 (Total)	0	0	0	3,239,424	9,292,800	13,929,984

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-6	A (m2)	4	4	4	13	24	32
	L (m)	4,000	4,000	4,000	16,000	32,000	36,000
Dique	V (m3)	17,280	17,280	17,280	206,720	783,360	1,149,120
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	345,600	345,600	345,600	4,134,400	15,667,200	22,982,400
	A (m2)	1	1	1	1	2	2
	L (m)	4,000	4,000	4,000	16,000	32,000	36,000
Revestimiento	V (m3)	3,420	3,420	3,420	20,880	59,840	88,920
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	376,200	376,200	376,200	2,296,800	6,582,400	9,781,200
Sub-Total	Cost (S./.)	721,800	721,800	721,800	6,431,200	22,249,600	32,763,600
	Project Cost=A6	1,342,548	1,342,548	1,342,548	11,962,032	41,384,256	60,940,296
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost=B6	43,308	43,308	43,308	385,872	1,334,976	1,965,816
	Project Cost A&B6 (Total)	1,385,856	1,385,856	1,385,856	12,347,904	42,719,232	62,906,112
	Project Cost A&B123456 (Grand Total)	4,320,230	4,320,230	157,460,661	257,576,358	476,717,847	637,290,549
	Only Construction Cost	4,185,223	4,185,223	152,540,016	249,527,097	461,820,414	617,375,220
	Lands & Houses	135,007	135,007	4,920,646	8,049,261	14,897,433	19,915,330

遊水地必要Volume 必要Volume低減		77 60%	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Item of Cost	Description							
Retarding Basin								
	Required A1 (m2)		0	0	10,000,000	10,000,000	10,000,000	10,000,000
Retarding Basin-1	Required V (M m3)		0	0	46	46	46	46
	Necessary H (m)	#DIV/0!	#DIV/0!		4.6	4.6	4.6	4.6
	L1 (m)		0	0	3,162	3,162	3,162	3,162
	V1 (m3)		0	0	15,440,000	15,440,000	15,440,000	15,440,000
Excavation	Rate (S./ /m3)		10	10	10	10	10	10
	Cost (S./)		0	0	154,400,000	154,400,000	154,400,000	154,400,000
	A (m2)		90	90	90	90	90	90
	L (m)		0	0	12,649	12,649	12,649	12,649
Dique	V (m3)		0	0	1,138,420	1,138,420	1,138,420	1,138,420
	Rate (S./ /m3)		20	20	20	20	20	20
	Cost (S./)		0	0	22,768,399	22,768,399	22,768,399	22,768,399
	A (m2)		2.25	2.25	2.25	2.25	2.25	2.25
	L (m)		0	0	12,649	12,649	12,649	12,649
Revestimiento	V (m3)		0	0	28,460	28,460	28,460	28,460
	Rate (S./ /m3)		110	110	110	110	110	110
	Cost (S./)		0	0	3,130,655	3,130,655	3,130,655	3,130,655
Sub-Total	Cost (S./)		0	0	180,299,054	180,299,054	180,299,054	180,299,054
	Project Cost-RB		0	0	335,356,241	335,356,241	335,356,241	335,356,241
Land Acquisition Residential	A (m2)							
	Rate (S./ /m2)		700	700	700	700	700	700
	Cost (S./)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)				10,000,000	10,000,000	10,000,000	10,000,000
	Rate (S./ /m2)		0	0	0	0	0	0
	Cost (S./)		0	0	0	0	0	0
House Relocation	Nos.							
	Rate (S./ /house)		70000	70000	70000	70000	70000	70000
	Cost (S./)		0	0	0	0	0	0
	Project Cost-RB1		0	0	10,817,943	10,817,943	10,817,943	10,817,943
	Project Cost RA&RB1 (Total)		0	0	346,174,184	346,174,184	346,174,184	346,174,184
Target-1								
	A (m2)		0	7	7	8	12	21
	L (m)		0	1,000	1,000	4,000	12,000	20,000
Dique	V (m3)		0	6,820	6,820	30,720	138,240	413,600
	Rate (S./ /m3)		20	20	20	20	20	20
	Cost (S./)		0	136,400	136,400	614,400	2,764,800	8,272,000
	A (m2)		0	0.945	0.945	0.99	1.17	1.44
	L (m)		0	1,000	1,000	4,000	12,000	20,000
Revestimiento	V (m3)		0	945	945	3,960	14,040	28,800
	Rate (S./ /m3)		110	110	110	110	110	110
	Cost (S./)		0	103,950	103,950	435,600	1,544,400	3,168,000
Sub-Total	Cost (S./)		0	240,350	240,350	1,050,000	4,309,200	11,440,000
	Project Cost-A1		0	447,051	447,051	1,953,000	8,015,112	21,278,400
Land Acquisition Residential	A (m2)							
	Rate (S./ /m2)		700	700	700	700	700	700
	Cost (S./)		0	0	0	0	0	0
Land Acquisition Rural	A (m2)							
	Rate (S./ /m2)		50	50	50	50	50	50
	Cost (S./)		0	0	0	0	0	0
House Relocation	Nos.							
	Rate (S./ /house)		70000	70000	70000	70000	70000	70000
	Cost (S./)		0	0	0	0	0	0
	Project Cost-B1		0	14,421	14,421	63,000	258,552	686,400
	Project Cost A&B1 (Total)		0	461,472	461,472	2,016,000	8,273,664	21,964,800
	Project Cost A&B1 (Grand Total)		0	461,472	346,635,656	348,190,184	354,447,848	368,138,984
	Only Construction Cost		0	447,051	335,803,292	337,309,241	343,371,353	356,634,641
	Lands & Houses		0	14,421	10,832,364	10,880,943	11,076,495	11,504,343

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Change of Dam Operation (Chira River)							
Required Reservoir	Required V (M m3)	5.0	10.0	10.0	10.0	10.0	10.0
	Required V (m3)	5,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
	Unit Cost (S./.)	10	10	10	10	10	10
Sub-Total	Cost (S./.)	50,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	Project Cost-CDO	50,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
	Project Cost-RB_Comp	0	0	0	0	0	0
	Project Cost A&B1 (Total)	50,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
Retarding Basin							
	Required A1 (m2)	3,000,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Retarding Basin-1	Required V (M m3)	5.0	10.0	10.0	10.0	10.0	10.0
	Necessary H (m)	1.7	2.9	2.9	2.9	2.9	2.9
	L1 (m)	5,196	5,612	5,612	5,612	5,612	5,612
	V1 (m3)	1,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Excavation	Rate (S././m3)	10	10	10	10	10	10
	Cost (S./.)	10,000,000	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000
	A (m2)	44	44	44	44	44	44
	L (m)	5,196	5,612	5,612	5,612	5,612	5,612
Dique	V (m3)	228,631	246,949	246,949	246,949	246,949	246,949
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	4,572,614	4,938,988	4,938,988	4,938,988	4,938,988	4,938,988
	A (m2)	2.25	2.25	2.25	2.25	2.25	2.25
	L (m)	5,196	5,612	5,612	5,612	5,612	5,612
Revestimiento	V (m3)	11,691	12,628	12,628	12,628	12,628	12,628
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	1,286,048	1,389,090	1,389,090	1,389,090	1,389,090	1,389,090
Sub-Total	Cost (S./.)	15,858,662	26,328,078	26,328,078	26,328,078	26,328,078	26,328,078
	Project Cost-RB	29,497,111	48,970,225	48,970,225	48,970,225	48,970,225	48,970,225
	A (m2)	3,000,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Land Acquisition Rural	Rate (S././m2)	10	10	10	10	10	10
	Cost (S./.)	30,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000
	Nos.	0	0	0	0	0	0
House Relocation	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-RB_Comp	30,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000
	Project Cost A&B1 (Total)	59,497,111	83,970,225	83,970,225	83,970,225	83,970,225	83,970,225
Target-1							
	A (m2)	4.32	4.32	5.13	8.03	8.03	9.12
	L (m)	1,000	2,000	4,000	6,000	8,000	8,000
Dique	V (m3)	4,320	8,640	20,520	48,180	64,240	72,960
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	86,400	172,800	410,400	963,600	1,284,800	1,459,200
	A (m2)	1.235	1.425	1.425	1.575	1.785	1.870
	L (m)	1,000	2,000	4,000	6,000	8,000	8,000
Revestimiento	V (m3)	1,235	2,850	5,700	9,450	14,280	14,960
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	135,850	313,500	627,000	1,039,500	1,570,800	1,645,600
Sub-Total	Cost (S./.)	222,250	486,300	1,037,400	2,003,100	2,855,600	3,104,800
	Project Cost-A1	413,385	904,518	1,929,564	3,725,766	5,311,416	5,774,928
	Project Cost-B1	13,335	29,178	62,244	120,186	171,336	186,288
	Project Cost A&B1 (Total)	426,720	933,696	1,991,808	3,845,952	5,482,752	5,961,216
Target-2							
	A (m2)	6.82	6.82	8.03	10.27	12.75	14.08
	L (m)	4,000	4,000	16,000	32,000	50,000	62,000
Dique	V (m3)	27,280	27,280	128,480	328,640	637,500	872,960
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	545,600	545,600	2,569,600	6,572,800	12,750,000	17,459,200
	A (m2)	1.575	1.575	1.575	1.955	2.375	2.470
	L (m)	4,000	4,000	16,000	32,000	50,000	62,000
Revestimiento	V (m3)	6,300	6,300	25,200	62,560	118,750	153,140
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	693,000	693,000	2,772,000	6,881,600	13,062,500	16,845,400
Sub-Total	Cost (S./.)	1,238,600	1,238,600	5,341,600	13,454,400	25,812,500	34,304,600
	Project Cost-A2	2,303,796	2,303,796	9,935,376	25,025,184	48,011,250	63,806,556
	Project Cost-B2	74,316	74,316	320,496	807,264	1,548,750	2,058,276
	Project Cost A&B2 (Total)	2,378,112	2,378,112	10,255,872	25,832,448	49,560,000	65,864,832
Target-3							
	A (m2)	6.82	9.12	9.12	11.48	16.92	20.00
	L (m)	2,000	2,000	8,000	12,000	18,000	24,000
Dique	V (m3)	13,640	18,240	72,960	137,760	304,560	480,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	272,800	364,800	1,459,200	2,755,200	6,091,200	9,600,000
	A (m2)	0.945	0.945	0.990	1.080	1.540	1.650
	L (m)	2,000	2,000	8,000	12,000	18,000	24,000
Revestimiento	V (m3)	1,890	1,890	7,920	12,960	27,720	39,600
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	207,900	207,900	871,200	1,425,600	3,049,200	4,356,000

Sub-Total	Cost (S./.)	480,700	572,700	2,330,400	4,180,800	9,140,400	13,956,000
	Project Cost-A3	894,102	1,065,222	4,334,544	7,776,288	17,001,144	25,958,160
	Project Cost-B3	28,842	34,362	139,824	250,848	548,424	837,360
	Project Cost A&B3 (Total)	922,944	1,099,584	4,474,368	8,027,136	17,549,568	26,795,520
	Project Cost A&B1234 (Grand Total)	63,224,887	88,381,617	100,692,273	121,675,761	156,562,545	182,591,793
	Only Construction Cost (River)	3,611,283	4,273,536	16,199,484	36,527,238	70,323,810	95,539,644
	Only Compensation Cost (River)	116,493	137,856	522,564	1,178,298	2,268,510	3,081,924
	Only Construction Cost (RB)	29,497,111	48,970,225	48,970,225	48,970,225	48,970,225	48,970,225
	Only Compensation Cost (RB)	30,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000
		63.22	88.38	100.69	121.68	156.56	182.59

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-1	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Dique	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	20	20	20	20	20	20
	Cost (S/.)	0	0	0	0	0	0
	A (m2)	0	0	0	0	0	0
	L (m)	0	0	0	0	0	0
Revestimiento	V (m3)	0	0	0	0	0	0
	Rate (S/. /m3)	110	110	110	110	110	110
	Cost (S/.)	0	0	0	0	0	0
Sub-Total	Cost (S/.)	0	0	0	0	0	0
	Project Cost-A1	0	0	0	0	0	0
Land Acquisition	A (m2)						
Residential	Rate (S/. /m2)	700	700	700	700	700	700
	Cost (S/.)	0	0	0	0	0	0
Land Acquisition	A (m2)						
Rural	Rate (S/. /m2)	50	50	50	50	50	50
	Cost (S/.)	0	0	0	0	0	0
	Number of People	7,530	7,837	12,067	13,941	19,812	21,522
House	Number of People/HH	4	4	4	4	4	4
Relocation	Nos.	1,883	1,960	3,017	3,486	4,953	5,381
	Rate (S/. /house)	70,000	70,000	70,000	70,000	70,000	70,000
	Cost (S/.)	131,810,000	137,200,000	211,190,000	244,020,000	346,710,000	376,670,000
	Project Cost-B1	131,810,000	137,200,000	211,190,000	244,020,000	346,710,000	376,670,000
	Project Cost A&B1 (Total)	131,810,000	137,200,000	211,190,000	244,020,000	346,710,000	376,670,000
	Project Cost A&B1 (Grand Total)	131,810,000	137,200,000	211,190,000	244,020,000	346,710,000	376,670,000
	Only Construction Cost	0	0	0	0	0	0
	Lands & Houses	131,810,000	137,200,000	211,190,000	244,020,000	346,710,000	376,670,000

遊水地必要Volume 必要Volume低減		72 60%						58
Item of Cost	Description		2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Retarding Basin	Required A1 (m2)		0	0	14,450,000	14,450,000	14,450,000	14,450,000
	Required V (M m3)		0	0	43	43	43	43
Retarding Basin-1	Necessary H (m)	#DIV/0!	#DIV/0!	#DIV/0!	3.0	3.0	3.0	3.0
	L1 (m)		0	0	2,688	2,688	2,688	2,688
	L2 (m)		0	0	5,376	5,376	5,376	5,376
	Required A1 (m2)		0	0	14,450,000	14,450,000	14,450,000	14,450,000
	Required V (M m3)		0	0	35	35	35	35
Retarding Basin-2	Necessary H (m)	#DIV/0!	#DIV/0!	#DIV/0!	2.4	2.4	2.4	2.4
	L1 (m)		0	0	2,688	2,688	2,688	2,688
	L2 (m)		0	0	5,376	5,376	5,376	5,376
	V1 (m3)		0	0	14,440,000	14,440,000	14,440,000	14,440,000
	V2 (m3)		0	0	14,450,000	14,450,000	14,450,000	14,450,000
Excavation	V (m3)		0	0	28,890,000	28,890,000	28,890,000	28,890,000
	Rate (S./m3)		10	10	10	10	10	10
	Cost (S./)		0	0	288,900,000	288,900,000	288,900,000	288,900,000
	A (m2)		44	44	44	44	44	44
	L (m)		0	0	16,128	16,128	16,128	16,128
Dique	V (m3)		0	0	709,615	709,615	709,615	709,615
	Rate (S./m3)		20	20	20	20	20	20
	Cost (S./)		0	0	14,192,302	14,192,302	14,192,302	14,192,302
	A (m2)		2.25	2.25	2.25	2.25	2.25	2.25
	L (m)		0	0	16,128	16,128	16,128	16,128
Revestimiento	V (m3)		0	0	36,287	36,287	36,287	36,287
	Rate (S./m3)		110	110	110	110	110	110
	Cost (S./)		0	0	3,991,585	3,991,585	3,991,585	3,991,585
Sub-Total	Cost (S./)		0	0	307,083,887	307,083,887	307,083,887	307,083,887
	Project Cost-RBA1		0	0	571,176,030	571,176,030	571,176,030	571,176,030
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S./m2)		0	0	0	0	0	0
	Cost (S./)		0	0	14,450,000	14,450,000	14,450,000	14,450,000
Land Acquisition Rural	A (m2)		0	0	0	0	0	0
	Rate (S./m2)		0	0	0	0	0	0
	Cost (S./)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S./house)		0	0	0	0	0	0
	Cost (S./)		0	0	0	0	0	0
	Project Cost-RBB1		0	0	18,425,033	18,425,033	18,425,033	18,425,033
	Project Cost RBA&RBB1 (Total)		0	0	589,601,063	589,601,063	589,601,063	589,601,063
Target-1	A (m2)		11	44	44	48	53	64
	L (m)		24,000	36,000	36,000	38,000	40,000	42,000
Dique	V (m3)		261,120	1,566,720	1,566,720	1,834,640	2,131,200	2,688,000
	Rate (S./m3)		20	20	20	20	20	20
	Cost (S./)		5,222,400	31,334,400	31,334,400	36,692,800	42,624,000	53,760,000
	A (m2)		1.215	1.89	1.89	1.98	2.07	2.25
	L (m)		24,000	36,000	36,000	38,000	40,000	42,000
Revestimiento	V (m3)		29,160	68,040	68,040	75,240	82,800	94,500
	Rate (S./m3)		110	110	110	110	110	110
	Cost (S./)		3,207,600	7,484,400	7,484,400	8,276,400	9,108,000	10,395,000
Sub-Total	Cost (S./)		8,430,000	38,818,800	38,818,800	44,969,200	51,732,000	64,155,000
	Project Cost-A1		15,679,800	72,202,968	72,202,968	83,642,712	96,221,520	119,328,300
Land Acquisition Residential	A (m2)		700	700	700	700	700	700
	Rate (S./m2)		0	0	0	0	0	0
	Cost (S./)		0	0	14,450,000	14,450,000	14,450,000	14,450,000
Land Acquisition Rural	A (m2)		50	50	50	50	50	50
	Rate (S./m2)		0	0	0	0	0	0
	Cost (S./)		0	0	0	0	0	0
House Relocation	Nos.		70000	70000	70000	70000	70000	70000
	Rate (S./house)		0	0	0	0	0	0
	Cost (S./)		0	0	0	0	0	0
	Project Cost-B1		505,800	2,329,128	2,329,128	2,698,152	3,103,920	3,849,300
	Project Cost A&B1 (Total)		16,185,600	74,532,096	74,532,096	86,340,864	99,325,440	123,177,600

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-2							
	A (m2)	3	5	5	6	6	8
	L (m)	6,000	7,000	7,000	7,000	8,000	8,000
Dique	V (m3)	18,480	35,000	35,000	40,040	45,760	64,960
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	369,600	700,000	700,000	800,800	915,200	1,299,200
	A (m2)	0.765	0.9	0.9	0.945	0.945	1.08
	L (m)	6,000	7,000	7,000	7,000	8,000	8,000
Revestimiento	V (m3)	4,590	6,300	6,300	6,615	7,560	8,640
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	504,900	693,000	693,000	727,650	831,600	950,400
Sub-Total	Cost (S./.)	874,500	1,393,000	1,393,000	1,528,450	1,746,800	2,249,600
	Project Cost-A2	1,626,570	2,590,980	2,590,980	2,842,917	3,249,048	4,184,256
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	52,470	83,580	83,580	91,707	104,808	134,976
	Project Cost A&B2 (Total)	1,679,040	2,674,560	2,674,560	2,934,624	3,353,856	4,319,232
Target-3							
	A (m2)	7	12	12	12	16	20
	L (m)	8,000	16,000	16,000	24,000	28,000	30,000
Dique	V (m3)	58,240	190,080	190,080	285,120	455,840	600,000
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	1,164,800	3,801,600	3,801,600	5,702,400	9,116,800	12,000,000
	A (m2)	1.035	1.26	1.26	1.26	1.44	1.575
	L (m)	8,000	16,000	16,000	24,000	28,000	30,000
Revestimiento	V (m3)	8,280	20,160	20,160	30,240	40,320	47,250
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	910,800	2,217,600	2,217,600	3,326,400	4,435,200	5,197,500
Sub-Total	Cost (S./.)	2,075,600	6,019,200	6,019,200	9,028,800	13,552,000	17,197,500
	Project Cost-A3	3,860,616	11,195,712	11,195,712	16,793,568	25,206,720	31,987,350
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B2	124,536	361,152	361,152	541,728	813,120	1,031,850
	Project Cost A&B3 (Total)	3,985,152	11,556,864	11,556,864	17,335,296	26,019,840	33,019,200
Target-4							
	A (m2)	12	20	20	21	24	27
	L (m)	6,000	14,000	14,000	30,000	36,000	38,000
Dique	V (m3)	69,120	276,920	276,920	633,600	861,120	1,021,440
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	1,382,400	5,538,400	5,538,400	12,672,000	17,222,400	20,428,800
	A (m2)	1.17	1.573	1.573	1.53	1.62	1.71
	L (m)	6,000	14,000	14,000	30,000	36,000	38,000
Revestimiento	V (m3)	7,020	22,022	22,022	45,900	58,320	64,980
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	772,200	2,422,420	2,422,420	5,049,000	6,415,200	7,147,800
Sub-Total	Cost (S./.)	2,154,600	7,960,820	7,960,820	17,721,000	23,637,600	27,576,600
	Project Cost-A4	4,007,556	14,807,125	14,807,125	32,961,060	43,965,936	51,292,476
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B4	129,276	477,649	477,649	1,063,260	1,418,256	1,654,596
	Project Cost A&B4 (Total)	4,136,832	15,284,774	15,284,774	34,024,320	45,384,192	52,947,072

Item of Cost	Description	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
Target-5							
	A (m2)	6	12	12	12	14	19
	L (m)	4,000	6,000	6,000	6,000	6,000	6,000
Dique	V (m3)	25,920	71,280	71,280	71,280	84,000	112,320
	Rate (S././m3)	20	20	20	20	20	20
	Cost (S./.)	518,400	1,425,600	1,425,600	1,425,600	1,680,000	2,246,400
	A (m2)	0.99	1.26	1.26	1.26	1.35	1.53
Revestimiento	L (m)	4,000	6,000	6,000	6,000	6,000	6,000
	V (m3)	3,960	7,560	7,560	7,560	8,100	9,180
	Rate (S././m3)	110	110	110	110	110	110
	Cost (S./.)	435,600	831,600	831,600	831,600	891,000	1,009,800
Sub-Total	Cost (S./.)	954,000	2,257,200	2,257,200	2,257,200	2,571,000	3,256,200
	Project Cost-A5	1,774,440	4,198,392	4,198,392	4,198,392	4,782,060	6,056,532
Land Acquisition Residential	A (m2)						
	Rate (S././m2)	700	700	700	700	700	700
	Cost (S./.)	0	0	0	0	0	0
Land Acquisition Rural	A (m2)						
	Rate (S././m2)	50	50	50	50	50	50
	Cost (S./.)	0	0	0	0	0	0
House Relocation	Nos.						
	Rate (S././house)	70000	70000	70000	70000	70000	70000
	Cost (S./.)	0	0	0	0	0	0
	Project Cost-B5	57240	135432	135432	135432	154260	195372
	Project Cost A&B5 (Total)	1,831,680	4,333,824	4,333,824	4,333,824	4,936,320	6,251,904
	Project Cost A&B12345 (Grand Total)	27,818,304	108,382,118	697,983,182	734,569,991	768,620,711	809,316,071
	Only Construction	26,948,982	104,995,177	676,171,207	711,614,679	744,601,314	784,024,944
	Only River Imp	26,948,982	104,995,177	104,995,177	140,438,649	173,425,284	212,848,914
	Lands & Houses	869,322	3,386,941	21,811,974	22,955,312	24,019,397	25,291,127

添付資料-8-4

各選定流域の算定された社会的内部収益率（TIRS）、純経済価値（VANS）及び費用便益費（B/C）結果

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.000 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	0	-0	0	-0
2	0	0	-0	0	0	0	0
3	0	0	-0	0	0	0	0
4	0	0	-0	0	0	0	0
5	0	0	-0	0	0	0	0
6	0	0	-0	0	0	0	0
7	0	0	-0	0	0	0	0
8	0	0	-0	0	0	0	0
9	0	0	-0	0	0	0	0
10	0	0	-0	0	0	0	0
11	0	0	-0	0	0	0	0
12	0	0	-0	0	0	0	0
13	0	0	-0	0	0	0	0
14	0	0	-0	0	0	0	0
15	0	0	-0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-0	4	-0	0	0	0	4

TIRS (EIRR) 50%
 社会的割引率 10%
 VANS (NPV) 1
 B/C 7.017

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.091 S/. Million
 Construction Cost: 0.323 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	1	-0	0	-1
2	0	0	-0	0	0	0	0
3	0	0	-0	0	0	0	0
4	0	0	-0	0	0	0	0
5	0	0	-0	0	0	0	0
6	0	0	-0	0	0	0	0
7	0	0	-0	0	0	0	0
8	0	0	-0	0	0	0	0
9	0	0	-0	0	0	0	0
10	0	0	-0	0	0	0	0
11	0	0	-0	0	0	0	0
12	0	0	-0	0	0	0	0
13	0	0	-0	0	0	0	0
14	0	0	-0	0	0	0	0
15	0	0	-0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-0	5	-0	1	0	0	4

TIRS (EIRR) 40%
 社会的割引率 10%
 VANS (NPV) 2
 B/C 4.013

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.158 S/. Million
 Construction Cost: 1.411 S/. Million
 O & M Cost : 1 %

10-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-1	0	0	2	-0	0	-2
2	0	0	-0	0		0	0
3	0	0	-0	0		0	0
4	0	0	-0	0		0	0
5	0	0	-0	0		0	0
6	0	0	-0	0		0	0
7	0	0	-0	0		0	0
8	0	0	-0	0		0	0
9	0	0	-0	0		0	0
10	0	1	-0	0		0	0
11	0	1	-0	0		0	1
12	0	1	-0	0		0	1
13	0	1	-0	0		0	1
14	0	1	-0	0		0	1
15	0	1	-0	0		0	1
16							0
17							0
18							0
19							0
20							0
21							0
22							0
23							0
24							0
25							0
26							0
27							0
28							0
29							0
30							0
31							0
32							0
33							0
34							0
35							0
36							0
37							0
38							0
39							0
40							0
41							0
42							0
43							0
44							0
45							0
46							0
47							0
48							0
49							0
50							0
51							0
52							0
53							0
54							0
55							0
56							0
57							0
58							0
59							0
60							0
61							0
62							0
63							0
64							0
65							0
66							0
67							0
68							0
69							0
100	-1	6	-0	2		0	4

TIRS (EIRR) 19%
 社会的割引率 10%
 VANS (NPV) 1
 B/C 1.620

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.212 S/. Million
 Construction Cost: 5.791 S/. Million
 O & M Cost : 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-6	0	0	6	-0	0	-6
2	0	0	-0	0		0	0
3	0	0	-0	0		0	0
4	0	0	-0	0		0	0
5	0	0	-0	0		0	0
6	0	0	-0	0		0	0
7	0	0	-0	0		0	0
8	0	1	-0	0		0	0
9	0	1	-0	0		0	0
10	0	1	-0	0		0	1
11	0	1	-0	0		0	1
12	0	1	-0	0		0	1
13	0	1	-0	0		0	1
14	0	1	-0	0		0	1
15	0	1	-0	0		0	1
16							0
17							0
18							0
19							0
20							0
21							0
22							0
23							0
24							0
25							0
26							0
27							0
28							0
29							0
30							0
31							0
32							0
33							0
34							0
35							0
36							0
37							0
38							0
39							0
40							0
41							0
42							0
43							0
44							0
45							0
46							0
47							0
48							0
49							0
50							0
51							0
52							0
53							0
54							0
55							0
56							0
57							0
58							0
59							0
60							0
61							0
62							0
63							0
64							0
65							0
66							0
67							0
68							0
69							0
100	-6	7	-1	7		0	-0

TIRS (EIRR) 0%
 社会的割引率 10%
 VANS (NPV) -3
 B/C 0.502

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.000 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	2	-2		-2
2	0	0	-0	0		0	0
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-0	34	-0	2		0	32

TIRS (EIRR) 50%
 社会的割引率 10%
 VANS (NPV) 12
 B/C 7.017

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.000 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	2	-2		-2
2	0	0	-0	0		0	0
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-0	34	-0	2		0	32

TIRS (EIRR) 50%
 社会的割引率 10%
 VANS (NPV) 12
 B/C 7.017

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.000 S./ Million
 Construction Cost: 0.231 S./ Million
 O & M Cost : 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-0	0	0	2	-2		-2
2	0	0	-0	0		0	1
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-0	34	-0	2			32
TIRS (EIRR)							50%
社会的割引率							10%
VANS (NPV)							12
B/C							6.293

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.003 S./ Million
 Construction Cost: 0.492 S./ Million
 O & M Cost : 1 %

25-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-0	0	0	3	-2		-3
2	0	0	-0	0		0	0
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-0	34	-0	3			32
TIRS (EIRR)							44%
社会的割引率							10%
VANS (NPV)							11
B/C							5.643

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.007 S/. Million
 Construction Cost: 1.146 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-1	0	0	3	-2		-3
2	0	0	-0	0		0	0
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-1	34	-0	3		0	31

TIRS (EIRR) 38%
 社会的割引率 10%
 VANS (NPV) 11
 B/C 4.479

River Cuenca Locumba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.010 S/. Million
 Construction Cost: 2.518 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	5	-2		-5
2	0	0	-0	0		0	0
3	0	1	-0	0		1	1
4	0	1	-0	0		1	1
5	0	2	-0	0		2	2
6	0	2	-0	0		2	2
7	0	2	-0	0		2	2
8	0	3	-0	0		3	3
9	0	3	-0	0		3	3
10	0	3	-0	0		3	3
11	0	3	-0	0		3	3
12	0	3	-0	0		3	3
13	0	3	-0	0		3	3
14	0	3	-0	0		3	3
15	0	3	-0	0		3	3
16						3	3
17						3	3
18						3	3
19						3	3
20						3	3
21						3	3
22						3	3
23						3	3
24						3	3
25						3	3
26						3	3
27						3	3
28						3	3
29						3	3
30						3	3
31						3	3
32						3	3
33						3	3
34						3	3
35						3	3
36						3	3
37						3	3
38						3	3
39						3	3
40						3	3
41						3	3
42						3	3
43						3	3
44						3	3
45						3	3
46						3	3
47						3	3
48						3	3
49						3	3
50						3	3
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-3	34	-0	5		0	29

TIRS (EIRR) 30%
 社会的割引率 10%
 VANS (NPV) 9
 B/C 3.126

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 32
 Construction Term: 5 years
 Evaluation Term: 19 years
 Annual Average Benefit: 9.550 S./ Million
 Construction Cost: 83.422 S./ Million
 O & M Cost: 1 %

Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-17	0	0	19	-2		-19
2	-17	2	-0	17		0	-15
3	-17	4	-0	17		1	-13
4	-17	7	-1	17		1	-10
5	-17	9	-1	17		1	-8
6	0	11	-1	1		2	11
7	0	12	-1	1		2	11
8	0	12	-1	1		2	11
9	0	12	-1	1		3	11
10	0	12	-1	1		3	12
11	0	13	-1	1		3	12
12	0	13	-1	1		3	12
13	0	13	-1	1		3	12
14	0	13	-1	1		3	12
15	0	13	-1	1		3	12
16	0	13	-1	1		3	12
17	0	13	-1	1		3	12
18	0	13	-1	1		3	12
19	0	13	-1	1		3	12
20							
21							
22							
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67							
68							
69							
100	-83	196	-13	99			97
TIRS (EIRR) 10%							
社会的割引率 10%							
VANS (NPV) 1							
B/C 1.020							

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 28
 Construction Term: 1 years
 Evaluation Term: 15 years
 Annual Average Benefit: 1.069 S./ Million
 Construction Cost: 3.169 S./ Million
 O & M Cost: 1 %

Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-3	0	0	5	-2		-5
2	0	1	-0	0		0	1
3	0	2	-0	0		1	2
4	0	2	-0	0		1	2
5	0	2	-0	0		1	2
6	0	3	-0	0		2	3
7	0	3	-0	0		2	3
8	0	3	-0	0		2	3
9	0	4	-0	0		3	4
10	0	4	-0	0		3	4
11	0	4	-0	0		3	4
12	0	4	-0	0		3	4
13	0	4	-0	0		3	4
14	0	4	-0	0		3	4
15	0	4	-0	0		3	4
16							
17							
18							
19							
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65							
66							
67							
68							
69							
100	-3	45	-0	6			40
TIRS (EIRR) 41%							
社会的割引率 10%							
VANS (NPV) 15							
B/C 4.007							

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 29
 Construction Term: 2 years
 Evaluation Term: 16 years
 Annual Average Benefit: 3.756 S./ Million
 Construction Cost: 13.314 S./ Million
 O & M Cost: 1 %

5-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-7	0	0	9	-2		-9
2	-7	2	-0	7		0	-5
3	0	4	-0	0		1	4
4	0	5	-0	0		1	5
5	0	5	-0	0		1	5
6	0	6	-0	0		2	6
7	0	6	-0	0		2	6
8	0	6	-0	0		2	6
9	0	6	-0	0		3	6
10	0	7	-0	0		3	6
11	0	7	-0	0		3	7
12	0	7	-0	0		3	7
13	0	7	-0	0		3	7
14	0	7	-0	0		3	7
15	0	7	-0	0		3	7
16	0	7	-0	0		3	7
17							
18							
19							
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66							
67							
68							
69							
100	-13	88	-2	17			71

TIRS (EIRR) 32%
 社会的割引率 10%
 VANS (NPV) 23
 B/C 2.634

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 30
 Construction Term: 3 years
 Evaluation Term: 17 years
 Annual Average Benefit: 5.859 S./ Million
 Construction Cost: 30.474 S./ Million
 O & M Cost: 1 %

10-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-10	0	0	12	-2		-12
2	-10	2	-0	10		0	-8
3	-10	5	-0	10		1	-6
4	0	7	-0	0		1	7
5	0	7	-0	0		1	7
6	0	8	-0	0		2	7
7	0	8	-0	0		2	8
8	0	8	-0	0		2	8
9	0	8	-0	0		3	8
10	0	9	-0	0		3	8
11	0	9	-0	0		3	9
12	0	9	-0	0		3	9
13	0	9	-0	0		3	9
14	0	9	-0	0		3	9
15	0	9	-0	0		3	9
16	0	9	-0	0		3	9
17	0	9	-0	0		3	9
18							
19							
20							
21							
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64							
65							
66							
67							
68							
69							
100	-30	124	-5	37			88

TIRS (EIRR) 21%
 社会的割引率 10%
 VANS (NPV) 22
 B/C 1.744

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 32
 Construction Term: 5 years
 Evaluation Term: 19 years
 Annual Average Benefit: 8.307 S/. Million
 Construction Cost: 60.312 S/. Million
 O & M Cost: 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-12	0	0	14	-2		-14	
2	-12	2	-0	12		0	-10	
3	-12	4	-0	12		1	-8	
4	-12	6	-0	12		1	-6	
5	-12	8	-0	13		1	-4	
6	0	10	-1	1		2	10	
7	0	10	-1	1		2	10	
8	0	11	-1	1		2	10	
9	0	11	-1	1		3	10	
10	0	11	-1	1		3	11	
11	0	11	-1	1		3	11	
12	0	11	-1	1		3	11	
13	0	11	-1	1		3	11	
14	0	11	-1	1		3	11	
15	0	11	-1	1		3	11	
16	0	11	-1	1		3	11	
17	0	11	-1	1		3	11	
18	0	11	-1	1		3	11	
19	0	11	-1	1		3	11	
20								
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62								
63								
64								
65								
66								
67								
68								
69								
100	-60	176	-10	72			104	
							TIRS (EIRR)	14%
							社会的割引率	10%
							VANS (NPV)	13
							B/C	1.252

添付-8-78

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 34
 Construction Term: 7 years
 Evaluation Term: 21 years
 Annual Average Benefit: 10.396 S/. Million
 Construction Cost: 126.952 S/. Million
 O & M Cost: 1 %

100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-18	0	0	20	-2		-20	
2	-18	2	-0	18		0	-17	
3	-18	4	-0	18		1	-15	
4	-18	5	-1	19		1	-13	
5	-18	7	-1	19		1	-11	
6	-18	9	-1	19		2	-10	
7	-18	11	-1	19		2	-8	
8	0	13	-1	1		2	11	
9	0	13	-1	1		3	12	
10	0	13	-1	1		3	12	
11	0	13	-1	1		3	12	
12	0	13	-1	1		3	12	
13	0	13	-1	1		3	12	
14	0	13	-1	1		3	12	
15	0	13	-1	1		3	12	
16	0	13	-1	1		3	12	
17	0	13	-1	1		3	12	
18	0	13	-1	1		3	12	
19	0	13	-1	1		3	12	
20	0	13	-1	1		3	12	
21	0	13	-1	1		3	12	
22								
23								
24								
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64								
65								
66								
67								
68								
69								
100	-127	226	-22	150			75	
							TIRS (EIRR)	6%
							社会的割引率	10%
							VANS (NPV)	-23
							B/C	0.758

River Cuenca Piura + Chira
 評価対象期間(行番号) 41
 Construction Term : 8 years
 Evaluation Term : 28 years
 Annual Average Benefit: 20.776 S./ Million
 Construction Cost: 164.515 S./ Million
 O & M Cost : 1 %

50-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-21	0	0	24	-4		-24	
2	-21	3	-0	24	-4	1	-21	
3	-21	7	-0	24	-3	2	-17	
4	-21	11	-1	21	0	3	-10	
5	-21	16	-1	21	0	5	-6	
6	-21	21	-1	22		8	-1	
7	-21	25	-1	22		10	3	
8	-21	29	-1	22		11	7	
9	0	33	-2	2		12	31	
10	0	34	-2	2		13	33	
11	0	35	-2	2		15	34	
12	0	36	-2	2		15	35	
13	0	36	-2	2		16	35	
14	0	36	-2	2		16	35	
15	0	36	-2	2		16	35	
16	0	36	-2	2		16	35	
17	0	36	-2	2		16	35	
18	0	36	-2	2		16	35	
19	0	36	-2	2		16	35	
20	0	36	-2	2		16	35	
21	0	36	-2	2		16	35	
22	0	36	-2	2		16	35	
23	0	36	-2	2		16	35	
24	0	36	-2	2		16	35	
25	0	36	-2	2		16	35	
26	0	36	-2	2		16	35	
27	0	36	-2	2		16	35	
28	0	36	-2	2		16	35	
29								
30								
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65								
66								
67								
68								
69								
100	-165	834	-39	213			621	
							TIRS (EIRR)	17.5%
							社会的割引率	10%
							VANS (NPV)	78
							B/C	1.608

River Cuenca Piura + Chira
 評価対象期間(行番号) 28
 Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.881 S./ Million
 Construction Cost: 1.165 S./ Million
 O & M Cost : 1 %

2-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-1	0	0	5	-4		-5	
2	0	1	-0	4	-4	1	-2	
3	0	3	-0	3	-3	2	-0	
4	0	4	-0	0	0	3	4	
5	0	6	-0	0	0	5	6	
6	0	8	-0	0	0	8	8	
7	0	10	-0	0	0	10	10	
8	0	12	-0	0	0	11	12	
9	0	13	-0	0	0	12	13	
10	0	14	-0	0	0	13	14	
11	0	16	-0	0	0	15	15	
12	0	16	-0	0	0	15	16	
13	0	17	-0	0	0	16	17	
14	0	17	-0	0	0	16	17	
15	0	17	-0	0	0	16	17	
16								
17								
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64								
65								
66								
67								
68								
69								
100	-1	154	-0	11			143	
							TIRS (EIRR)	53%
							社会的割引率	10%
							VANS (NPV)	51
							B/C	6.473

River: Cuenca Piura + Chira
 評価対象期間(行番号): 29
 Construction Term: 2 years
 Evaluation Term: 16 years
 Annual Average Benefit: 5.068 S./ Million
 Construction Cost: 17.900 S./ Million
 O & M Cost: 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1		0	0	13	-4		-13	
2	-9	3	-0	13	-4	1	-10	
3	0	7	-0	3	-3	2	4	
4	0	8	-0	0	0	3	8	
5	0	10	-0	0	0	5	10	
6	0	13	-0	0		8	12	
7	0	15	-0	0		10	14	
8	0	16	-0	0		11	16	
9	0	17	-0	0		12	17	
10	0	18	-0	0		13	18	
11	0	20	-0	0		15	20	
12	0	20	-0	0		15	20	
13	0	21	-0	0		16	21	
14	0	21	-0	0		16	21	
15	0	21	-0	0		16	21	
16	0	21	-0	0		16	21	
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
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64								
65								
66								
67								
68								
69								
100	-18	231	-3	30			201	
							TIRS (EIRR)	38%
							社会的割引率	10%
							VANS (NPV)	66
							B/C	3.652

River: Cuenca Piura + Chira
 評価対象期間(行番号): 30
 Construction Term: 3 years
 Evaluation Term: 17 years
 Annual Average Benefit: 9.908 S./ Million
 Construction Cost: 59.957 S./ Million
 O & M Cost: 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-20	0	0	24	-4		-24	
2	-20	4	-0	24	-4	1	-20	
3	-20	8	-0	23	-3	2	-15	
4	0	13	-1	1	0	3	13	
5	0	15	-1	1	0	5	15	
6	0	18	-1	1		8	17	
7	0	19	-1	1		10	19	
8	0	21	-1	1		11	20	
9	0	22	-1	1		12	22	
10	0	23	-1	1		13	23	
11	0	25	-1	1		15	24	
12	0	25	-1	1		15	25	
13	0	26	-1	1		16	25	
14	0	26	-1	1		16	25	
15	0	26	-1	1		16	25	
16	0	26	-1	1		16	25	
17	0	26	-1	1		16	25	
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
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30								
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64								
65								
66								
67								
68								
69								
100	-60	322	-9	79			243	
							TIRS (EIRR)	23%
							社会的割引率	10%
							VANS (NPV)	62
							B/C	2.004

River Cuenca Rimac

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.149 S/. Million
 Construction Cost: 0.850 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-1	0	0	8	-7		-8
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	6	-0	0		6	6
7	0	7	-0	0		7	7
8	0	8	-0	0		8	8
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	11	-0	0		11	11
13	0	11	-0	0		11	11
14	0	11	-0	0		11	11
15	0	11	-0	0		11	11
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-1	107	-0	8			99

TIRS (EIRR) 43%
 社会的割引率 10%
 VANS (NPV) 35
 B/C 5.906

River Cuenca Rimac

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.327 S/. Million
 Construction Cost: 1.242 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-1	0	0	8	-7		-8
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	6	-0	0		6	6
7	0	8	-0	0		7	8
8	0	8	-0	0		8	8
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	11	-0	0		11	11
13	0	11	-0	0		11	11
14	0	11	-0	0		11	11
15	0	11	-0	0		11	11
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-1	110	-0	8			101

TIRS (EIRR) 43%
 社会的割引率 10%
 VANS (NPV) 36
 B/C 5.764

River Cuenca Rimac

Construction Term : 1 years years
 Evaluation Term : 15 years years
 Annual Average Benefit: 0.396 S/. Million S/. Million
 Construction Cost: 1.242 S/. Million S/. Million
 O & M Cost : 1 % %

10-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-1	0	0	8	-7		-8
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	6	-0	0		6	6
7	0	8	-0	0		7	8
8	0	9	-0	0		8	9
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	11	-0	0		11	11
13	0	11	-0	0		11	11
14	0	11	-0	0		11	11
15	0	11	-0	0		11	11
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-1	111	-0	8			102
						TIRS (EIRR) 44%	
						社会的割引率 10%	
						VANS (NPV) 36	
						B/C 5.825	

River Cuenca Rimac

Construction Term : 1 years years
 Evaluation Term : 15 years years
 Annual Average Benefit: 0.439 S/. Million S/. Million
 Construction Cost: 1.792 S/. Million S/. Million
 O & M Cost : 1 % %

25-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-2	0	0	9	-7		-9
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	6	-0	0		6	6
7	0	8	-0	0		7	8
8	0	9	-0	0		8	9
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	12	-0	0		11	12
13	0	12	-0	0		11	12
14	0	12	-0	0		11	12
15	0	12	-0	0		11	12
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-2	111	-0	9			102
						TIRS (EIRR) 42%	
						社会的割引率 10%	
						VANS (NPV) 36	
						B/C 5.473	

River Cuenca Rimac

Construction Term : 1 years
Evaluation Term : 15 years
Annual Average Benefit: 0.457 S/. Million
Construction Cost: 2.497 S/. Million
O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-2	0	0	9	-7		-9
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	7	-0	0		6	6
7	0	8	-0	0		7	8
8	0	9	-0	0		8	9
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	12	-0	0		11	12
13	0	12	-0	0		11	12
14	0	12	-0	0		11	12
15	0	12	-0	0		11	12
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-2	111	-0	10			102

TIRS (EIRR) 40%
社会的割引率 10%
VANS (NPV) 35
B/C 5.056

River Cuenca Rimac

Construction Term : 1 years
Evaluation Term : 15 years
Annual Average Benefit: 0.467 S/. Million
Construction Cost: 2.772 S/. Million
O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	10	-7		-10
2	0	1	-0	0		1	1
3	0	2	-0	0		2	2
4	0	3	-0	0		3	3
5	0	5	-0	0		4	5
6	0	7	-0	0		6	6
7	0	8	-0	0		7	8
8	0	9	-0	0		8	9
9	0	9	-0	0		9	9
10	0	10	-0	0		10	10
11	0	11	-0	0		11	11
12	0	12	-0	0		11	12
13	0	12	-0	0		11	12
14	0	12	-0	0		11	12
15	0	12	-0	0		11	12
16						11	11
17						11	11
18						11	11
19						11	11
20						11	11
21						11	11
22						11	11
23						11	11
24						11	11
25						11	11
26						11	11
27						11	11
28						11	11
29						11	11
30						11	11
31						11	11
32						11	11
33						11	11
34						11	11
35						11	11
36						11	11
37						11	11
38						11	11
39						11	11
40						11	11
41						11	11
42						11	11
43						11	11
44						11	11
45						11	11
46						11	11
47						11	11
48						11	11
49						11	11
50						11	11
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-3	112	-0	10			102

TIRS (EIRR) 40%
社会的割引率 10%
VANS (NPV) 35
B/C 4.913

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.294 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	4	-4	-4	-4
2	0	1	-0	2	-2	1	-2
3	0	2	-0	0	2	2	2
4	0	3	-0	0	3	3	3
5	0	4	-0	0	4	4	4
6	0	6	-0	0	5	5	6
7	0	7	-0	0	6	6	7
8	0	7	-0	0	7	7	7
9	0	8	-0	0	8	8	8
10	0	9	-0	0	9	9	9
11	0	10	-0	0	9	10	10
12	0	10	-0	0	10	10	10
13	0	10	-0	0	10	10	10
14	0	10	-0	0	10	10	10
15	0	10	-0	0	10	10	10
16					10		
17					10		
18					10		
19					10		
20					10		
21					10		
22					10		
23					10		
24					10		
25					10		
26					10		
27					10		
28					10		
29					10		
30					10		
31					10		
32					10		
33					10		
34					10		
35					10		
36					10		
37					10		
38					10		
39					10		
40					10		
41					10		
42					10		
43					10		
44					10		
45					10		
46					10		
47					10		
48					10		
49					10		
50					10		
51					0		
52					0		
53					0		
54					0		
55					0		
56					0		
57					0		
58					0		
59					0		
60					0		
61					0		
62					0		
63					0		
64					0		
65					0		
66					0		
67					0		
68					0		
69					0		
100	-0	95	-0	6			90

TIRS (EIRR) 54%
 社会的割引率 10%
 VANS (NPV) 33
 B/C 7.234

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 5.948 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	4	-4	-4	-4
2	0	6	-0	2	-2	1	4
3	0	7	-0	0	2	2	7
4	0	9	-0	0	3	3	9
5	0	10	-0	0	4	4	10
6	0	11	-0	0	5	5	11
7	0	12	-0	0	6	6	12
8	0	13	-0	0	7	7	13
9	0	14	-0	0	8	8	14
10	0	15	-0	0	9	9	15
11	0	15	-0	0	9	10	15
12	0	16	-0	0	10	10	16
13	0	16	-0	0	10	10	16
14	0	16	-0	0	10	10	16
15	0	16	-0	0	10	10	16
16					10		
17					10		
18					10		
19					10		
20					10		
21					10		
22					10		
23					10		
24					10		
25					10		
26					10		
27					10		
28					10		
29					10		
30					10		
31					10		
32					10		
33					10		
34					10		
35					10		
36					10		
37					10		
38					10		
39					10		
40					10		
41					10		
42					10		
43					10		
44					10		
45					10		
46					10		
47					10		
48					10		
49					10		
50					10		
51					0		
52					0		
53					0		
54					0		
55					0		
56					0		
57					0		
58					0		
59					0		
60					0		
61					0		
62					0		
63					0		
64					0		
65					0		
66					0		
67					0		
68					0		
69					0		
100	-0	175	-0	6			169

TIRS (EIRR) 158%
 社会的割引率 10%
 VANS (NPV) 71
 B/C 14.462

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 9.949 S./ Million
 Construction Cost: 0.437 S./ Million
 O & M Cost : 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-0	0	0	4	-4		-4
2	0	10	-0	2	-2	1	8
3	0	11	-0	0		2	11
4	0	13	-0	0		3	13
5	0	14	-0	0		4	14
6	0	15	-0	0		5	15
7	0	16	-0	0		6	16
8	0	17	-0	0		7	17
9	0	18	-0	0		8	18
10	0	19	-0	0		9	18
11	0	19	-0	0		9	19
12	0	20	-0	0		10	20
13	0	20	-0	0		10	20
14	0	20	-0	0		10	20
15	0	20	-0	0		10	20
16						10	
17						10	
18						10	
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-0	231	-0	6			224

TIRS (EIRR) 230%
 社会的割引率 10%
 VANS (NPV) 97
 B/C 18.103

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 14.585 S./ Million
 Construction Cost: 12.687 S./ Million
 O & M Cost : 1 %

25-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-13	0	0	16	-4		-16
2	0	15	-0	3	-2	1	13
3	0	16	-0	0		2	16
4	0	17	-0	0		3	17
5	0	19	-0	0		4	18
6	0	20	-0	0		5	20
7	0	21	-0	0		6	21
8	0	22	-0	0		7	22
9	0	22	-0	0		8	22
10	0	23	-0	0		9	23
11	0	24	-0	0		9	24
12	0	24	-0	0		10	24
13	0	24	-0	0		10	24
14	0	24	-0	0		10	24
15	0	24	-0	0		10	24
16						10	
17						10	
18						10	
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-13	296	-2	20			275

TIRS (EIRR) 92%
 社会的割引率 10%
 VANS (NPV) 116
 B/C 7.582

River Cuenca Ica

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 16.933 S/. Million
 Construction Cost: 27.968 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-14	0	0	18	-4		-18
2	-14	9	-0	17	-2	1	-8
3	0	18	-0	0		2	18
4	0	20	-0	0		3	19
5	0	21	-0	0		4	21
6	0	22	-0	0		5	22
7	0	23	-0	0		6	23
8	0	24	-0	0		7	24
9	0	25	-0	0		8	24
10	0	25	-0	0		9	25
11	0	26	-0	0		9	26
12	0	27	-0	0		10	26
13	0	27	-0	0		10	26
14	0	27	-0	0		10	26
15	0	27	-0	0		10	26
16	0	27	-0	0		10	26
17						10	
18						10	
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-28	346	-4	38			308

TIRS (EIRR) 57%
 社会的割引率 10%
 VANS (NPV) 117
 B/C 4.728

River Cuenca Ica

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 18.433 S/. Million
 Construction Cost: 99.074 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-25	0	0	28	-4		-28
2	-25	5	-0	27	-2	1	-22
3	-25	11	-0	25		2	-15
4	-25	16	-1	26		3	-9
5	0	22	-1	1		4	21
6	0	24	-1	1		5	23
7	0	25	-1	1		6	24
8	0	26	-1	1		7	25
9	0	26	-1	1		8	25
10	0	27	-1	1		9	26
11	0	28	-1	1		9	27
12	0	28	-1	1		10	27
13	0	28	-1	1		10	27
14	0	28	-1	1		10	27
15	0	28	-1	1		10	27
16	0	28	-1	1		10	27
17	0	28	-1	1		10	27
18	0	28	-1	1		10	27
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-99	406	-15	120			285

TIRS (EIRR) 21%
 社会的割引率 10%
 VANS (NPV) 65
 B/C 1.721

River Cuenca Mantaro

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 1.968 S./ Million
 Construction Cost: 26.208 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	30	-4	-4	-30
2	0	3	-0	4	-4	1	-1
3	0	4	-0	2	-2	2	2
4	0	5	-0	0		3	5
5	0	7	-0	0		5	7
6	0	9	-0	0		7	9
7	0	11	-0	0		9	11
8	0	12	-0	0		10	12
9	0	13	-0	0		11	13
10	0	14	-0	0		12	14
11	0	15	-0	0		13	15
12	0	16	-0	0		14	16
13	0	16	-0	0		14	16
14	0	16	-0	0		14	16
15	0	16	-0	0		14	16
16						14	
17						14	
18						14	
19						14	
20						14	
21						14	
22						14	
23						14	
24						14	
25						14	
26						14	
27						14	
28						14	
29						14	
30						14	
31						14	
32						14	
33						14	
34						14	
35						14	
36						14	
37						14	
38						14	
39						14	
40						14	
41						14	
42						14	
43						14	
44						14	
45						14	
46						14	
47						14	
48						14	
49						14	
50						14	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-26	157	-4	39		0	119

TIRS (EIRR) 21%
 社会的割引率 10%
 VANS (NPV) 30
 B/C 1.916

River Cuenca Mantaro

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 5.229 S./ Million
 Construction Cost: 51.454 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	29	-4	-4	-29
2	-26	3	-0	30	-4	1	-26
3	0	7	-1	2	-2	2	5
4	0	9	-1	1		3	8
5	0	10	-1	1		5	10
6	0	12	-1	1		7	12
7	0	14	-1	1		9	14
8	0	15	-1	1		10	15
9	0	16	-1	1		11	16
10	0	17	-1	1		12	17
11	0	19	-1	1		13	18
12	0	19	-1	1		14	19
13	0	19	-1	1		14	19
14	0	19	-1	1		14	19
15	0	19	-1	1		14	19
16	0	19	-1	1		14	19
17						14	
18						14	
19						14	
20						14	
21						14	
22						14	
23						14	
24						14	
25						14	
26						14	
27						14	
28						14	
29						14	
30						14	
31						14	
32						14	
33						14	
34						14	
35						14	
36						14	
37						14	
38						14	
39						14	
40						14	
41						14	
42						14	
43						14	
44						14	
45						14	
46						14	
47						14	
48						14	
49						14	
50						14	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-51	220	-7	68		0	152

TIRS (EIRR) 18%
 社会的割引率 10%
 VANS (NPV) 32
 B/C 1.572

River Cuenca Mantaro

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 6.884 S/. Million
 Construction Cost: 52.224 S/. Million
 O & M Cost : 1 %

10-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-26	0	0	30	-4		-30
2	-26	4	-0	30	-4	1	-26
3	0	9	-1	2	-2	2	6
4	0	10	-1	1		3	10
5	0	12	-1	1		5	11
6	0	14	-1	1		7	13
7	0	16	-1	1		9	15
8	0	17	-1	1		10	16
9	0	18	-1	1		11	18
10	0	19	-1	1		12	19
11	0	20	-1	1		13	20
12	0	21	-1	1		14	20
13	0	21	-1	1		14	21
14	0	21	-1	1		14	21
15	0	21	-1	1		14	21
16	0	21	-1	1		14	21
17						14	14
18						14	14
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-52	244	-8	69			175
						TIRS (EIRR)	20%
						社会的割引率	10%
						VANS (NPV)	42
						B/C	1.744

River Cuenca Mantaro

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 7.993 S/. Million
 Construction Cost: 55.745 S/. Million
 O & M Cost : 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-56	0	0	59	-4		-59
2	0	9	-1	4	-4	1	4
3	0	10	-1	2	-2	2	7
4	0	11	-1	1		3	11
5	0	13	-1	1		5	13
6	0	15	-1	1		7	15
7	0	17	-1	1		9	16
8	0	18	-1	1		10	18
9	0	19	-1	1		11	19
10	0	20	-1	1		12	20
11	0	21	-1	1		13	21
12	0	22	-1	1		14	21
13	0	22	-1	1		14	22
14	0	22	-1	1		14	22
15	0	22	-1	1		14	22
16						14	14
17						14	14
18						14	14
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-56	242	-8	72			169
						TIRS (EIRR)	19%
						社会的割引率	10%
						VANS (NPV)	42
						B/C	1.675

River **Cuenca Mantaro**

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 8.380 S/. Million
 Construction Cost: 66.097 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-22	0	0	26	-4		-26	
2	-22	3	-0	26	-4	1	-23	
3	-22	7	-0	24	-2	2	-17	
4	0	12	-1	1		3	11	
5	0	13	-1	1		5	13	
6	0	15	-1	1		7	15	
7	0	17	-1	1		9	17	
8	0	18	-1	1		10	18	
9	0	20	-1	1		11	19	
10	0	21	-1	1		12	20	
11	0	22	-1	1		13	21	
12	0	22	-1	1		14	22	
13	0	23	-1	1		14	22	
14	0	23	-1	1		14	22	
15	0	23	-1	1		14	22	
16	0	23	-1	1		14	22	
17	0	23	-1	1		14	22	
18						14	22	
19						14	22	
20						14	22	
21						14	22	
22						14	22	
23						14	22	
24						14	22	
25						14	22	
26						14	22	
27						14	22	
28						14	22	
29						14	22	
30						14	22	
31						14	22	
32						14	22	
33						14	22	
34						14	22	
35						14	22	
36						14	22	
37						14	22	
38						14	22	
39						14	22	
40						14	22	
41						14	22	
42						14	22	
43						14	22	
44						14	22	
45						14	22	
46						14	22	
47						14	22	
48						14	22	
49						14	22	
50						14	22	
51						0	0	
52						0	0	
53						0	0	
54						0	0	
55						0	0	
56						0	0	
57						0	0	
58						0	0	
59						0	0	
60						0	0	
61						0	0	
62						0	0	
63						0	0	
64						0	0	
65						0	0	
66						0	0	
67						0	0	
68						0	0	
69						0	0	
100	-66	284	-10	85			199	
							TIRS (EIRR)	19%
							社会的割引率	10%
							VANS (NPV)	42
							B/C	1.639

River **Cuenca Mantaro**

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 8.584 S/. Million
 Construction Cost: 85.788 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-86	0	0	89	-4		-89	
2	0	9	-1	4	-4	1	5	
3	0	10	-1	3	-2	2	8	
4	0	12	-1	1		3	11	
5	0	14	-1	1		5	13	
6	0	16	-1	1		7	15	
7	0	17	-1	1		9	17	
8	0	19	-1	1		10	18	
9	0	20	-1	1		11	19	
10	0	21	-1	1		12	20	
11	0	22	-1	1		13	21	
12	0	23	-1	1		14	22	
13	0	23	-1	1		14	22	
14	0	23	-1	1		14	22	
15	0	23	-1	1		14	22	
16						14	22	
17						14	22	
18						14	22	
19						14	22	
20						14	22	
21						14	22	
22						14	22	
23						14	22	
24						14	22	
25						14	22	
26						14	22	
27						14	22	
28						14	22	
29						14	22	
30						14	22	
31						14	22	
32						14	22	
33						14	22	
34						14	22	
35						14	22	
36						14	22	
37						14	22	
38						14	22	
39						14	22	
40						14	22	
41						14	22	
42						14	22	
43						14	22	
44						14	22	
45						14	22	
46						14	22	
47						14	22	
48						14	22	
49						14	22	
50						14	22	
51						0	0	
52						0	0	
53						0	0	
54						0	0	
55						0	0	
56						0	0	
57						0	0	
58						0	0	
59						0	0	
60						0	0	
61						0	0	
62						0	0	
63						0	0	
64						0	0	
65						0	0	
66						0	0	
67						0	0	
68						0	0	
69						0	0	
100	-86	250	-12	107			143	
							TIRS (EIRR)	13%
							社会的割引率	10%
							VANS (NPV)	16
							B/C	1.180

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 82,489 S./ Million
 Construction Cost: 234,707 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-23	0	0	27	-4		-27
2	-23	9	-0	27	-4	1	-19
3	-23	18	-0	28	-4	2	-9
4	-23	28	-1	27	-3	4	2
5	-23	39	-1	24		6	15
6	-23	50	-1	25		9	26
7	-23	61	-1	25		12	36
8	-23	72	-2	25		14	47
9	-23	82	-2	25		16	57
10	-23	92	-2	26		18	66
11	0	102	-2	2		19	99
12	0	103	-2	2		20	101
13	0	104	-2	2		21	101
14	0	104	-2	2		21	102
15	0	104	-2	2		21	102
16	0	104	-2	2		21	102
17	0	104	-2	2		21	102
18	0	104	-2	2		21	102
19	0	104	-2	2		21	102
20	0	104	-2	2		21	102
21	0	104	-2	2		21	102
22	0	104	-2	2		21	102
23	0	104	-2	2		21	102
24	0	104	-2	2		21	102
25						21	
26						21	
27						21	
28						21	
29						21	
30						21	
31						21	
32						21	
33						21	
34						21	
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-235	1,902	-43	292			1,611

TIRS (EIRR) 37%
 社会的割引率 10%
 VANS (NPV) 355
 B/C 1.451

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 14 years
 Evaluation Term : 28 years
 Annual Average Benefit: 202,073 S./ Million
 Construction Cost: 365,775 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	30	-4		-30
2	-26	15	-0	30	-4	1	-15
3	-26	31	-1	30	-4	2	0
4	-26	47	-1	30	-3	4	17
5	-26	64	-1	27		6	37
6	-26	81	-1	27		9	54
7	-26	98	-2	28		12	71
8	-26	115	-2	28		14	87
9	-26	131	-2	28		16	103
10	-26	147	-2	28		18	119
11	-26	164	-3	29		19	135
12	-26	179	-3	29		20	150
13	-26	194	-3	29		21	165
14	-26	209	-3	30		21	180
15	0	224	-4	4		21	220
16	0	224	-4	4		21	220
17	0	224	-4	4		21	220
18	0	224	-4	4		21	220
19	0	224	-4	4		21	220
20	0	224	-4	4		21	220
21	0	224	-4	4		21	220
22	0	224	-4	4		21	220
23	0	224	-4	4		21	220
24	0	224	-4	4		21	220
25	0	224	-4	4		21	220
26	0	224	-4	4		21	220
27	0	224	-4	4		21	220
28	0	224	-4	4		21	220
29						21	
30						21	
31						21	
32						21	
33						21	
34						21	
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-366	4,605	-75	454			4,150

TIRS (EIRR) 54%
 社会的割引率 10%
 VANS (NPV) 809
 B/C 4.678

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 14 years
 Evaluation Term : 28 years
 Annual Average Benefit: 259.756 S./ Million
 Construction Cost: 451.881 S./ Million
 O & M Cost : 1 %

10-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-32	0	0	36	-4		-36
2	-32	19	-0	36	-4	1	-17
3	-32	39	-1	37	-4	2	2
4	-32	59	-1	36	-3	4	23
5	-32	80	-1	34		6	47
6	-32	102	-2	34		9	68
7	-32	123	-2	34		12	89
8	-32	144	-2	35		14	109
9	-32	164	-3	35		16	129
10	-32	185	-3	35		18	149
11	-32	205	-3	36		19	169
12	-32	224	-4	36		20	189
13	-32	244	-4	36		21	208
14	-32	263	-4	36		21	226
15	0	281	-5	5		21	277
16	0	281	-5	5		21	277
17	0	281	-5	5		21	277
18	0	281	-5	5		21	277
19	0	281	-5	5		21	277
20	0	281	-5	5		21	277
21	0	281	-5	5		21	277
22	0	281	-5	5		21	277
23	0	281	-5	5		21	277
24	0	281	-5	5		21	277
25	0	281	-5	5		21	277
26	0	281	-5	5		21	277
27	0	281	-5	5		21	277
28	0	281	-5	5		21	277
29						21	
30						21	
31						21	
32						21	
33						21	
34						21	
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-452	5,787	-93	558			5,229

TIRS (EIRR) 56%
 社会的割引率 10%
 VANS (NPV) 1,023
 B/C 4.801

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 20 years
 Evaluation Term : 34 years
 Annual Average Benefit: 302.876 S./ Million
 Construction Cost: 557.220 S./ Million
 O & M Cost : 1 %

25-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-28	0	0	31	-4		-31
2	-28	16	-0	32	-4	1	-16
3	-28	32	-1	32	-4	2	-0
4	-28	49	-1	31	-3	4	18
5	-28	67	-1	29		6	38
6	-28	85	-1	29		9	55
7	-28	102	-2	30		12	73
8	-28	120	-2	30		14	90
9	-28	137	-2	30		16	107
10	-28	154	-3	30		18	123
11	-28	171	-3	31		19	140
12	-28	187	-3	31		20	156
13	-28	203	-3	31		21	172
14	-28	218	-4	31		21	187
15	-28	233	-4	32		21	202
16	-28	249	-4	32		21	217
17	-28	264	-4	32		21	231
18	-28	279	-5	33		21	246
19	-28	294	-5	33		21	261
20	-28	309	-5	33		21	276
21	0	324	-6	6		21	319
22	0	324	-6	6		21	319
23	0	324	-6	6		21	319
24	0	324	-6	6		21	319
25	0	324	-6	6		21	319
26	0	324	-6	6		21	319
27	0	324	-6	6		21	319
28	0	324	-6	6		21	319
29	0	324	-6	6		21	319
30	0	324	-6	6		21	319
31	0	324	-6	6		21	319
32	0	324	-6	6		21	319
33	0	324	-6	6		21	319
34	0	324	-6	6		21	319
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-557	7,708	-131	702			7,007

TIRS (EIRR) 53%
 社会的割引率 10%
 VANS (NPV) 1,013
 B/C 4.760

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba							
		Construction Term :		21 years			
		Evaluation Term :		35 years			
		Annual Average Benefit:		320.089 S/. Million			
		Construction Cost:		603.461 S/. Million			
		O & M Cost :		1 %			
50-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-29	0	0	32	-4		-32
2	-29	16	-0	33	-4	1	-17
3	-29	32	-1	33	-4	2	-1
4	-29	49	-1	32	-3	4	17
5	-29	67	-1	30		6	37
6	-29	85	-1	30		9	55
7	-29	103	-2	30		12	73
8	-29	121	-2	31		14	90
9	-29	138	-2	31		16	107
10	-29	155	-3	31		18	123
11	-29	172	-3	32		19	140
12	-29	188	-3	32		20	156
13	-29	204	-3	32		21	172
14	-29	220	-4	33		21	187
15	-29	235	-4	33		21	202
16	-29	250	-4	33		21	217
17	-29	265	-5	33		21	232
18	-29	281	-5	34		21	247
19	-29	296	-5	34		21	262
20	-29	311	-5	34		21	277
21	-29	326	-6	34		21	292
22	0	342	-6	6		21	335
23	0	342	-6	6		21	335
24	0	342	-6	6		21	335
25	0	342	-6	6		21	335
26	0	342	-6	6		21	335
27	0	342	-6	6		21	335
28	0	342	-6	6		21	335
29	0	342	-6	6		21	335
30	0	342	-6	6		21	335
31	0	342	-6	6		21	335
32	0	342	-6	6		21	335
33	0	342	-6	6		21	335
34	0	342	-6	6		21	335
35	0	342	-6	6		21	335
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-603	8,294	-145	762			7,533
						TIRS (EIRR)	52%
						社会的割引率	10%
						VANS (NPV)	1,035
						B/C	4.671

添付-8-93

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba							
		Construction Term :		25 years			
		Evaluation Term :		39 years			
		Annual Average Benefit:		329.743 S/. Million			
		Construction Cost:		654.227 S/. Million			
		O & M Cost :		1 %			
100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-26	0	0	30	-4		-30
2	-26	14	-0	30	-4	1	-16
3	-26	28	-1	30	-4	2	-2
4	-26	43	-1	30	-3	4	14
5	-26	59	-1	27		6	32
6	-26	75	-1	27		9	47
7	-26	91	-2	28		12	63
8	-26	106	-2	28		14	78
9	-26	121	-2	28		16	93
10	-26	136	-2	29		18	108
11	-26	151	-3	29		19	122
12	-26	165	-3	29		20	136
13	-26	179	-3	29		21	150
14	-26	193	-3	30		21	163
15	-26	206	-4	30		21	176
16	-26	219	-4	30		21	189
17	-26	232	-4	30		21	202
18	-26	246	-4	31		21	215
19	-26	259	-5	31		21	228
20	-26	272	-5	31		21	241
21	-26	285	-5	31		21	254
22	-26	298	-5	32		21	267
23	-26	312	-6	32		21	280
24	-26	325	-6	32		21	293
25	-26	338	-6	32		21	306
26	0	351	-7	7		21	345
27	0	351	-7	7		21	345
28	0	351	-7	7		21	345
29	0	351	-7	7		21	345
30	0	351	-7	7		21	345
31	0	351	-7	7		21	345
32	0	351	-7	7		21	345
33	0	351	-7	7		21	345
34	0	351	-7	7		21	345
35	0	351	-7	7		21	345
36	0	351	-7	7		21	345
37	0	351	-7	7		21	345
38	0	351	-7	7		21	345
39	0	351	-7	7		21	345
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-654	9,271	-170	838			8,433
						TIRS (EIRR)	50%
						社会的割引率	10%
						VANS (NPV)	962
						B/C	4.557

River Cuenca Nanay

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 17,363 S/. Million
 Construction Cost: 27,565 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-14	0	0	14	-1		-14
2	-14	9	-0	14		0	-5
3	0	18	-0	0		0	17
4	0	18	-0	0		0	17
5	0	18	-0	0		1	18
6	0	18	-0	0		1	18
7	0	18	-0	0		1	18
8	0	18	-0	0		1	18
9	0	18	-0	0		1	18
10	0	18	-0	0		1	18
11	0	19	-0	0		1	18
12	0	19	-0	0		1	18
13	0	19	-0	0		1	18
14	0	19	-0	0		1	18
15	0	19	-0	0		1	18
16	0	19	-0	0		1	18
17						1	18
18						1	18
19						1	18
20						1	18
21						1	18
22						1	18
23						1	18
24						1	18
25						1	18
26						1	18
27						1	18
28						1	18
29						1	18
30						1	18
31						1	18
32						1	18
33						1	18
34						1	18
35						1	18
36						1	18
37						1	18
38						1	18
39						1	18
40						1	18
41						1	18
42						1	18
43						1	18
44						1	18
45						1	18
46						1	18
47						1	18
48						1	18
49						1	18
50						0	0
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-28	264	-4	32			232

TIRS (EIRR) 61%
 社会的割引率 10%
 VANS (NPV) 91
 B/C 4.465

River Cuenca Nanay

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 41,004 S/. Million
 Construction Cost: 37,242 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-19	0	0	19	-1		-19
2	-19	21	-0	19		0	2
3	0	41	-0	0		0	41
4	0	41	-0	0		0	41
5	0	42	-0	0		1	41
6	0	42	-0	0		1	41
7	0	42	-0	0		1	41
8	0	42	-0	0		1	42
9	0	42	-0	0		1	42
10	0	42	-0	0		1	42
11	0	42	-0	0		1	42
12	0	42	-0	0		1	42
13	0	42	-0	0		1	42
14	0	42	-0	0		1	42
15	0	42	-0	0		1	42
16	0	42	-0	0		1	42
17						1	42
18						1	42
19						1	42
20						1	42
21						1	42
22						1	42
23						1	42
24						1	42
25						1	42
26						1	42
27						1	42
28						1	42
29						1	42
30						1	42
31						1	42
32						1	42
33						1	42
34						1	42
35						1	42
36						1	42
37						1	42
38						1	42
39						1	42
40						1	42
41						1	42
42						1	42
43						1	42
44						1	42
45						1	42
46						1	42
47						1	42
48						1	42
49						1	42
50						0	0
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-37	607	-5	43			564

TIRS (EIRR) 107%
 社会的割引率 10%
 VANS (NPV) 236
 B/C 7.669

River Cuenca Nanay

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 54.243 S./ Million
 Construction Cost: 42.694 S./ Million
 O & M Cost : 1 %

10-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-21	0	0	22	-1		-22
2	-21	27	-0	22		0	6
3	0	54	-0	0		0	54
4	0	55	-0	0		0	54
5	0	55	-0	0		1	54
6	0	55	-0	0		1	55
7	0	55	-0	0		1	55
8	0	55	-0	0		1	55
9	0	55	-0	0		1	55
10	0	55	-0	0		1	55
11	0	55	-0	0		1	55
12	0	55	-0	0		1	55
13	0	55	-0	0		1	55
14	0	55	-0	0		1	55
15	0	55	-0	0		1	55
16	0	55	-0	0		1	55
17						1	
18						1	
19						1	
20						1	
21						1	
22						1	
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-43	799	-6	50			749

TIRS (EIRR) 124%
 社会的割引率 10%
 VANS (NPV) 317
 B/C 8.832

River Cuenca Nanay

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 65.059 S./ Million
 Construction Cost: 54.680 S./ Million
 O & M Cost : 1 %

25-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-18	0	0	19	-1		-19
2	-18	22	-0	18		0	3
3	-18	44	-0	19		0	25
4	0	65	-1	1		0	65
5	0	66	-1	1		1	65
6	0	66	-1	1		1	65
7	0	66	-1	1		1	65
8	0	66	-1	1		1	65
9	0	66	-1	1		1	65
10	0	66	-1	1		1	66
11	0	66	-1	1		1	66
12	0	66	-1	1		1	66
13	0	66	-1	1		1	66
14	0	66	-1	1		1	66
15	0	66	-1	1		1	66
16	0	66	-1	1		1	66
17	0	66	-1	1		1	66
18						1	
19						1	
20						1	
21						1	
22						1	
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-55	990	-8	64			926

TIRS (EIRR) 116%
 社会的割引率 10%
 VANS (NPV) 366
 B/C 8.409

River Cuenca Nanay

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 69.701 S/. Million
 Construction Cost: 68.894 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-23	0	0	24	-1		-24
2	-23	23	-0	23		0	0
3	-23	47	-0	23		0	23
4	0	70	-1	1		0	69
5	0	70	-1	1		1	70
6	0	70	-1	1		1	70
7	0	70	-1	1		1	70
8	0	71	-1	1		1	70
9	0	71	-1	1		1	70
10	0	71	-1	1		1	70
11	0	71	-1	1		1	70
12	0	71	-1	1		1	70
13	0	71	-1	1		1	70
14	0	71	-1	1		1	70
15	0	71	-1	1		1	70
16	0	71	-1	1		1	70
17	0	71	-1	1		1	70
18						1	
19						1	
20						1	
21						1	
22						1	
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-69	1,059	-10	80			979

TIRS (EIRR) 99%
 社会的割引率 10%
 VANS (NPV) 383
 B/C 7.164

River Cuenca Nanay

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 72.642 S/. Million
 Construction Cost: 74.752 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-25	0	0	26	-1		-26
2	-25	24	-0	25		0	-1
3	-25	49	-0	25		0	23
4	0	73	-1	1		0	72
5	0	73	-1	1		1	72
6	0	73	-1	1		1	73
7	0	73	-1	1		1	73
8	0	74	-1	1		1	73
9	0	74	-1	1		1	73
10	0	74	-1	1		1	73
11	0	74	-1	1		1	73
12	0	74	-1	1		1	73
13	0	74	-1	1		1	73
14	0	74	-1	1		1	73
15	0	74	-1	1		1	73
16	0	74	-1	1		1	73
17	0	74	-1	1		1	73
18						1	
19						1	
20						1	
21						1	
22						1	
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-75	1,103	-11	87			1,017

TIRS (EIRR) 95%
 社会的割引率 10%
 VANS (NPV) 396
 B/C 6.883

River Cuenca Urubamba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 6.484 S/. Million
 Construction Cost: 3.024 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	7	-4		-7
2	0	7	-0	3	-3	1	4
3	0	8	-0	0		2	8
4	0	9	-0	0		3	9
5	0	11	-0	0		4	11
6	0	13	-0	0		6	13
7	0	14	-0	0		7	14
8	0	15	-0	0		8	15
9	0	15	-0	0		9	15
10	0	16	-0	0		10	16
11	0	17	-0	0		11	17
12	0	18	-0	0		11	18
13	0	18	-0	0		11	18
14	0	18	-0	0		11	18
15	0	18	-0	0		11	18
16						11	
17						11	
18						11	
19						11	
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-3	196	-0	10			185
						TIRS (EIRR)	99%
						社会的割引率	10%
						VANS (NPV)	76
						B/C	9.417

River Cuenca Urubamba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 13.849 S/. Million
 Construction Cost: 3.024 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	7	-4		-7
2	0	14	-0	3	-3	1	11
3	0	16	-0	0		2	15
4	0	17	-0	0		3	17
5	0	18	-0	0		4	18
6	0	20	-0	0		6	20
7	0	21	-0	0		7	21
8	0	22	-0	0		8	22
9	0	23	-0	0		9	23
10	0	24	-0	0		10	24
11	0	25	-0	0		11	25
12	0	25	-0	0		11	25
13	0	25	-0	0		11	25
14	0	25	-0	0		11	25
15	0	25	-0	0		11	25
16						11	
17						11	
18						11	
19						11	
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-3	299	-0	10			289
						TIRS (EIRR)	193%
						社会的割引率	10%
						VANS (NPV)	125
						B/C	14.908

River Cuenca Urubamba

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 22.434 S/. Million
 Construction Cost: 73.097 S/. Million
 O & M Cost : 1 %

10-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-24	0	0	28	-4		-28
2	-24	8	-0	28	-3	1	-20
3	-24	17	-0	25		2	-8
4	0	25	-1	1		3	25
5	0	27	-1	1		4	26
6	0	28	-1	1		6	28
7	0	30	-1	1		7	29
8	0	31	-1	1		8	30
9	0	31	-1	1		9	31
10	0	32	-1	1		10	32
11	0	33	-1	1		11	32
12	0	34	-1	1		11	33
13	0	34	-1	1		11	33
14	0	34	-1	1		11	33
15	0	34	-1	1		11	33
16	0	34	-1	1		11	33
17	0	34	-1	1		11	33
18						11	
19						11	
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-73	464	-11	91			373

TIRS (EIRR) 33%
 社会的割引率 10%
 VANS (NPV) 116
 B/C 2.630

River Cuenca Urubamba

Construction Term : 9 years
 Evaluation Term : 23 years
 Annual Average Benefit: 34.884 S/. Million
 Construction Cost: 226.479 S/. Million
 O & M Cost : 1 %

25-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-25	0	0	29	-4		-29
2	-25	4	-0	29	-3	1	-24
3	-25	9	-1	26		2	-16
4	-25	15	-1	26		3	-11
5	-25	20	-1	26		4	-6
6	-25	25	-1	26		6	-1
7	-25	31	-2	27		7	4
8	-25	35	-2	27		8	8
9	-25	40	-2	27		9	13
10	0	45	-2	2		10	42
11	0	46	-2	2		11	43
12	0	46	-2	2		11	44
13	0	46	-2	2		11	44
14	0	46	-2	2		11	44
15	0	46	-2	2		11	44
16	0	46	-2	2		11	44
17	0	46	-2	2		11	44
18	0	46	-2	2		11	44
19	0	46	-2	2		11	44
20	0	46	-2	2		11	44
21	0	46	-2	2		11	44
22	0	46	-2	2		11	44
23	0	46	-2	2		11	44
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-226	822	-41	274			548

TIRS (EIRR) 17%
 社会的割引率 10%
 VANS (NPV) 77
 B/C 1.471

River Cuenca Urubamba

Construction Term : 14 years
 Evaluation Term : 28 years
 Annual Average Benefit: 40,801 S/. Million
 Construction Cost: 338,867 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-24	0	0	28	-4		-28
2	-24	3	-0	28	-3	1	-24
3	-24	7	-0	25		2	-17
4	-24	12	-1	25		3	-13
5	-24	16	-1	25		4	-9
6	-24	21	-1	25		6	-5
7	-24	25	-1	26		7	-1
8	-24	29	-2	26		8	3
9	-24	32	-2	26		9	6
10	-24	36	-2	26		10	10
11	-24	40	-2	27		11	13
12	-24	43	-3	27		11	16
13	-24	46	-3	27		11	19
14	-24	49	-3	27		11	22
15	0	52	-3	3		11	49
16	0	52	-3	3		11	49
17	0	52	-3	3		11	49
18	0	52	-3	3		11	49
19	0	52	-3	3		11	49
20	0	52	-3	3		11	49
21	0	52	-3	3		11	49
22	0	52	-3	3		11	49
23	0	52	-3	3		11	49
24	0	52	-3	3		11	49
25	0	52	-3	3		11	49
26	0	52	-3	3		11	49
27	0	52	-3	3		11	49
28	0	52	-3	3		11	49
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-339	1,086	-69	415			671

TIRS (EIRR) 13%
 社会的割引率 10%
 VANS (NPV) 47
 B/C 1.233

River Cuenca Urubamba

Construction Term : 15 years
 Evaluation Term : 29 years
 Annual Average Benefit: 44,511 S/. Million
 Construction Cost: 411,498 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-27	0	0	31	-4		-31
2	-27	4	-0	31	-3	1	-28
3	-27	8	-1	28		2	-20
4	-27	12	-1	28		3	-16
5	-27	16	-1	29		4	-12
6	-27	21	-1	29		6	-8
7	-27	25	-2	29		7	-4
8	-27	29	-2	29		8	-0
9	-27	33	-2	30		9	3
10	-27	37	-2	30		10	7
11	-27	40	-3	30		11	10
12	-27	44	-3	30		11	13
13	-27	47	-3	31		11	16
14	-27	50	-4	31		11	19
15	-27	53	-4	31		11	21
16	0	56	-4	4		11	51
17	0	56	-4	4		11	51
18	0	56	-4	4		11	51
19	0	56	-4	4		11	51
20	0	56	-4	4		11	51
21	0	56	-4	4		11	51
22	0	56	-4	4		11	51
23	0	56	-4	4		11	51
24	0	56	-4	4		11	51
25	0	56	-4	4		11	51
26	0	56	-4	4		11	51
27	0	56	-4	4		11	51
28	0	56	-4	4		11	51
29	0	56	-4	4		11	51
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-411	1,195	-86	505			690

TIRS (EIRR) 12%
 社会的割引率 10%
 VANS (NPV) 25
 B/C 1.109

River Ramis, Puraca and Azangaro

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 3.358 S./ Million
 Construction Cost: 19.471 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-19	0	0	23	-3		-23
2	0	4	-0	0		1	4
3	0	4	-0	0		1	4
4	0	5	-0	0		2	5
5	0	6	-0	0		2	6
6	0	7	-0	0		3	6
7	0	7	-0	0		4	7
8	0	7	-0	0		4	7
9	0	8	-0	0		5	8
10	0	8	-0	0		5	8
11	0	9	-0	0		5	9
12	0	9	-0	0		5	9
13	0	9	-0	0		5	9
14	0	9	-0	0		5	9
15	0	9	-0	0		5	9
16						5	
17						5	
18						5	
19						5	
20						5	
21						5	
22						5	
23						5	
24						5	
25						5	
26						5	
27						5	
28						5	
29						5	
30						5	
31						5	
32						5	
33						5	
34						5	
35						5	
36						5	
37						5	
38						5	
39						5	
40						5	
41						5	
42						5	
43						5	
44						5	
45						5	
46						5	
47						5	
48						5	
49						5	
50						5	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-19	100	-3	26			75

TIRS (EIRR) 24%
 社会的割引率 10%
 VANS (NPV) 22
 B/C 1.989

River Ramis, Puraca and Azangaro

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 10.007 S./ Million
 Construction Cost: 75.859 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-25	0	0	29	-3		-29
2	-25	4	-0	26		1	-22
3	-25	8	-1	26		1	-18
4	0	12	-1	1		2	11
5	0	13	-1	1		2	12
6	0	13	-1	1		3	13
7	0	14	-1	1		4	13
8	0	14	-1	1		4	13
9	0	15	-1	1		5	14
10	0	15	-1	1		5	14
11	0	15	-1	1		5	15
12	0	15	-1	1		5	15
13	0	15	-1	1		5	15
14	0	15	-1	1		5	15
15	0	15	-1	1		5	15
16	0	15	-1	1		5	15
17	0	15	-1	1		5	15
18						5	
19						5	
20						5	
21						5	
22						5	
23						5	
24						5	
25						5	
26						5	
27						5	
28						5	
29						5	
30						5	
31						5	
32						5	
33						5	
34						5	
35						5	
36						5	
37						5	
38						5	
39						5	
40						5	
41						5	
42						5	
43						5	
44						5	
45						5	
46						5	
47						5	
48						5	
49						5	
50						5	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-76	214	-11	91			124

TIRS (EIRR) 14%
 社会的割引率 10%
 VANS (NPV) 16
 B/C 1.227

River Ramis, Puraca and Azangaro

Construction Term : 7 years
 Evaluation Term : 21 years
 Annual Average Benefit: 16.864 S/. Million
 Construction Cost: 153.783 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-22	0	0	25	-3		-25
2	-22	3	-0	22		1	-19
3	-22	6	-0	22		1	-17
4	-22	9	-1	23		2	-14
5	-22	12	-1	23		2	-11
6	-22	15	-1	23		3	-8
7	-22	18	-1	23		4	-5
8	0	21	-2	2		4	19
9	0	21	-2	2		5	20
10	0	22	-2	2		5	20
11	0	22	-2	2		5	21
12	0	22	-2	2		5	21
13	0	22	-2	2		5	21
14	0	22	-2	2		5	21
15	0	22	-2	2		5	21
16	0	22	-2	2		5	21
17	0	22	-2	2		5	21
18	0	22	-2	2		5	21
19	0	22	-2	2		5	21
20	0	22	-2	2		5	21
21	0	22	-2	2		5	21
22						5	21
23						5	21
24						5	21
25						5	21
26						5	21
27						5	21
28						5	21
29						5	21
30						5	21
31						5	21
32						5	21
33						5	21
34						5	21
35						5	21
36						5	21
37						5	21
38						5	21
39						5	21
40						5	21
41						5	21
42						5	21
43						5	21
44						5	21
45						5	21
46						5	21
47						5	21
48						5	21
49						5	21
50						5	21
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-154	372	-26	183			189

TIRS (EIRR) 10%
 社会的割引率 10%
 VANS (NPV) 3
 B/C 1.024

River Ramis, Puraca and Azangaro

Construction Term : 7 years
 Evaluation Term : 21 years
 Annual Average Benefit: 17.478 S/. Million
 Construction Cost: 187.122 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-27	0	0	30	-3		-30
2	-27	3	-0	27		1	-24
3	-27	6	-1	27		1	-21
4	-27	9	-1	28		2	-18
5	-27	12	-1	28		2	-15
6	-27	16	-1	28		3	-12
7	-27	19	-2	28		4	-10
8	0	22	-2	2		4	20
9	0	22	-2	2		5	20
10	0	22	-2	2		5	21
11	0	23	-2	2		5	21
12	0	23	-2	2		5	21
13	0	23	-2	2		5	21
14	0	23	-2	2		5	21
15	0	23	-2	2		5	21
16	0	23	-2	2		5	21
17	0	23	-2	2		5	21
18	0	23	-2	2		5	21
19	0	23	-2	2		5	21
20	0	23	-2	2		5	21
21	0	23	-2	2		5	21
22						5	21
23						5	21
24						5	21
25						5	21
26						5	21
27						5	21
28						5	21
29						5	21
30						5	21
31						5	21
32						5	21
33						5	21
34						5	21
35						5	21
36						5	21
37						5	21
38						5	21
39						5	21
40						5	21
41						5	21
42						5	21
43						5	21
44						5	21
45						5	21
46						5	21
47						5	21
48						5	21
49						5	21
50						5	21
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-187	383	-32	222			160

TIRS (EIRR) 8%
 社会的割引率 10%
 VANS (NPV) -19
 B/C 0.869

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.000 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	0	-0	0	-0
2	0	0	-0	0	0	0	0
3	0	0	-0	0	0	0	0
4	0	0	-0	0	0	0	0
5	0	0	-0	0	0	0	0
6	0	0	-0	0	0	0	0
7	0	0	-0	0	0	0	0
8	0	0	-0	0	0	0	0
9	0	0	-0	0	0	0	0
10	0	0	-0	0	0	0	0
11	0	0	-0	0	0	0	0
12	0	0	-0	0	0	0	0
13	0	0	-0	0	0	0	0
14	0	0	-0	0	0	0	0
15	0	0	-0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-0	4	-0	0	0	0	4

TIRS (EIRR) 50%
 社会的割引率 10%
 VANS (NPV) 1
 B/C 7.017

River Cuenca Biabo

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.091 S/. Million
 Construction Cost: 0.323 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	1	-0	0	-1
2	0	0	-0	0	0	0	0
3	0	0	-0	0	0	0	0
4	0	0	-0	0	0	0	0
5	0	0	-0	0	0	0	0
6	0	0	-0	0	0	0	0
7	0	0	-0	0	0	0	0
8	0	0	-0	0	0	0	0
9	0	0	-0	0	0	0	0
10	0	0	-0	0	0	0	0
11	0	0	-0	0	0	0	0
12	0	0	-0	0	0	0	0
13	0	0	-0	0	0	0	0
14	0	0	-0	0	0	0	0
15	0	0	-0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-0	5	-0	1	0	0	4

TIRS (EIRR) 40%
 社会的割引率 10%
 VANS (NPV) 2
 B/C 4.013

River Cuenca Biabo

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 0.158 S/. Million
 Construction Cost: 242.618 S/. Million
 O & M Cost : 1 %

10-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
Year							
1	-24	0	0	25	-0		-25
2	-24	0	-0	25		0	-24
3	-24	0	-0	25		0	-25
4	-24	0	-1	25		0	-25
5	-24	0	-1	25		0	-25
6	-24	0	-1	25		0	-25
7	-24	0	-1	26		0	-25
8	-24	0	-2	26		0	-26
9	-24	0	-2	26		0	-26
10	-24	0	-2	26		0	-26
11	0	1	-2	2		0	-2
12	0	1	-2	2		0	-2
13	0	1	-2	2		0	-2
14	0	1	-2	2		0	-2
15	0	1	-2	2		0	-2
16	0	1	-2	2		0	-2
17	0	1	-2	2		0	-2
18	0	1	-2	2		0	-2
19	0	1	-2	2		0	-2
20	0	1	-2	2		0	-2
21	0	1	-2	2		0	-2
22	0	1	-2	2		0	-2
23	0	1	-2	2		0	-2
24	0	1	-2	2		0	-2
25							
26							
27							
28							
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62							
63							
64							
65							
66							
67							
68							
69							
100	-243	10	-45	288			-278
TIRS (EIRR)							-
社会的割引率							10%
VANS (NPV)							-159
B/C							0.018

添付-8-104

River Cuenca Biabo

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 0.212 S/. Million
 Construction Cost: 243.706 S/. Million
 O & M Cost : 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
Year							
1	-24	0	0	25	-0		-25
2	-24	0	-0	25		0	-25
3	-24	0	-0	25		0	-25
4	-24	0	-1	25		0	-25
5	-24	0	-1	25		0	-25
6	-24	0	-1	26		0	-25
7	-24	0	-1	26		0	-25
8	-24	0	-2	26		0	-26
9	-24	0	-2	26		0	-26
10	-24	1	-2	27		0	-26
11	0	1	-2	2		0	-2
12	0	1	-2	2		0	-2
13	0	1	-2	2		0	-2
14	0	1	-2	2		0	-2
15	0	1	-2	2		0	-2
16	0	1	-2	2		0	-2
17	0	1	-2	2		0	-2
18	0	1	-2	2		0	-2
19	0	1	-2	2		0	-2
20	0	1	-2	2		0	-2
21	0	1	-2	2		0	-2
22	0	1	-2	2		0	-2
23	0	1	-2	2		0	-2
24	0	1	-2	2		0	-2
25							
26							
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63							
64							
65							
66							
67							
68							
69							
100	-244	11	-45	289			-278
TIRS (EIRR)							-
社会的割引率							10%
VANS (NPV)							-159
B/C							0.019

River Cuenca Biabo

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 0.247 S/. Million
 Construction Cost: 248.086 S/. Million
 O & M Cost : 1 %

50-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-25	0	0	25	-0		-25	
2	-25	0	-0	25		0	-25	
3	-25	0	-0	25		0	-25	
4	-25	0	-1	26		0	-25	
5	-25	0	-1	26		0	-26	
6	-25	0	-1	26		0	-26	
7	-25	0	-1	26		0	-26	
8	-25	0	-2	27		0	-26	
9	-25	1	-2	27		0	-26	
10	-25	1	-2	27		0	-26	
11	0	1	-2	2		0	-2	
12	0	1	-2	2		0	-2	
13	0	1	-2	2		0	-2	
14	0	1	-2	2		0	-2	
15	0	1	-2	2		0	-2	
16	0	1	-2	2		0	-2	
17	0	1	-2	2		0	-2	
18	0	1	-2	2		0	-2	
19	0	1	-2	2		0	-2	
20	0	1	-2	2		0	-2	
21	0	1	-2	2		0	-2	
22	0	1	-2	2		0	-2	
23	0	1	-2	2		0	-2	
24	0	1	-2	2		0	-2	
25	0						0	
26	0						0	
27	0						0	
28	0						0	
29	0						0	
30	0						0	
31	0						0	
32	0						0	
33	0						0	
34	0						0	
35	0						0	
36	0						0	
37	0						0	
38	0						0	
39	0						0	
40	0						0	
41	0						0	
42	0						0	
43	0						0	
44	0						0	
45	0						0	
46	0						0	
47	0						0	
48	0						0	
49	0						0	
50	0						0	
51	0						0	
52	0						0	
53	0						0	
54	0						0	
55	0						0	
56	0						0	
57	0						0	
58	0						0	
59	0						0	
60	0						0	
61	0						0	
62	0						0	
63	0						0	
64	0						0	
65	0						0	
66	0						0	
67	0						0	
68	0						0	
69	0						0	
100	-248	12	-46	294			-282	
							TIRS (EIRR)	-
							社会的割引率	10%
							VANS (NPV)	-162
							B/C	0.020

River Cuenca Biabo

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 0.275 S/. Million
 Construction Cost: 257.669 S/. Million
 O & M Cost : 1 %

100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-26	0	0	26	-0		-26	
2	-26	0	-0	26		0	-26	
3	-26	0	-1	26		0	-26	
4	-26	0	-1	27		0	-26	
5	-26	0	-1	27		0	-27	
6	-26	0	-1	27		0	-27	
7	-26	0	-2	27		0	-27	
8	-26	0	-2	28		0	-27	
9	-26	1	-2	28		0	-27	
10	-26	1	-2	28		0	-27	
11	0	1	-3	3		0	-2	
12	0	1	-3	3		0	-2	
13	0	1	-3	3		0	-2	
14	0	1	-3	3		0	-2	
15	0	1	-3	3		0	-2	
16	0	1	-3	3		0	-2	
17	0	1	-3	3		0	-2	
18	0	1	-3	3		0	-2	
19	0	1	-3	3		0	-2	
20	0	1	-3	3		0	-2	
21	0	1	-3	3		0	-2	
22	0	1	-3	3		0	-2	
23	0	1	-3	3		0	-2	
24	0	1	-3	3		0	-2	
25	0						0	
26	0						0	
27	0						0	
28	0						0	
29	0						0	
30	0						0	
31	0						0	
32	0						0	
33	0						0	
34	0						0	
35	0						0	
36	0						0	
37	0						0	
38	0						0	
39	0						0	
40	0						0	
41	0						0	
42	0						0	
43	0						0	
44	0						0	
45	0						0	
46	0						0	
47	0						0	
48	0						0	
49	0						0	
50	0						0	
51	0						0	
52	0						0	
53	0						0	
54	0						0	
55	0						0	
56	0						0	
57	0						0	
58	0						0	
59	0						0	
60	0						0	
61	0						0	
62	0						0	
63	0						0	
64	0						0	
65	0						0	
66	0						0	
67	0						0	
68	0						0	
69	0						0	
100	-258	12	-48	306			-293	
							TIRS (EIRR)	-
							社会的割引率	10%
							VANS (NPV)	-168
							B/C	0.020

River Cuenca Chancay-Lambayeque
 評価対象期間(行番号) Construction Term : 9 years
 36 Evaluation Term : 23 years
 Annual Average Benefit: 9.550 S./ Million
 Construction Cost: 133.078 S./ Million
 O & M Cost : 1 %

50-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-15	0	0	17	-2		-17
2	-15	1	-0	15		0	-14
3	-15	3	-0	15		1	-12
4	-15	4	-0	15		1	-11
5	-15	6	-1	15		1	-10
6	-15	7	-1	16		2	-8
7	-15	8	-1	16		2	-7
8	-15	10	-1	16		2	-6
9	-15	11	-1	16		3	-5
10	0	12	-1	1		3	11
11	0	13	-1	1		3	11
12	0	13	-1	1		3	11
13	0	13	-1	1		3	11
14	0	13	-1	1		3	11
15	0	13	-1	1		3	11
16	0	13	-1	1		3	11
17	0	13	-1	1		3	11
18	0	13	-1	1		3	11
19	0	13	-1	1		3	11
20	0	13	-1	1		3	11
21	0	13	-1	1		3	11
22	0	13	-1	1		3	11
23	0	13	-1	1		3	11
24							
25							
26							
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66							
67							
68							
69							
100	-133	227	-24	159			68
TIRS (EIRR) 5%							
社会的割引率 10%							
VANS (NPV) -27							
B/C 0.709							

添付-8-106

River Cuenca Chancay-Lambayeque
 評価対象期間(行番号) Construction Term : 1 years
 28 Evaluation Term : 15 years
 Annual Average Benefit: 1.069 S./ Million
 Construction Cost: 53.741 S./ Million
 O & M Cost : 1 %

2-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-54	0	0	56	-2		-56
2	0	1	-1	1		0	1
3	0	2	-1	1		1	1
4	0	2	-1	1		1	2
5	0	2	-1	1		1	2
6	0	3	-1	1		2	2
7	0	3	-1	1		2	3
8	0	3	-1	1		2	3
9	0	4	-1	1		3	3
10	0	4	-1	1		3	3
11	0	4	-1	1		3	4
12	0	4	-1	1		3	4
13	0	4	-1	1		3	4
14	0	4	-1	1		3	4
15	0	4	-1	1		3	4
16							
17							
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66							
67							
68							
69							
100	-54	45	-8	63			-18
TIRS (EIRR) -4%							
社会的割引率 10%							
VANS (NPV) -35							
B/C 0.357							

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 29
 Construction Term: 2 years
 Evaluation Term: 16 years
 Annual Average Benefit: 3.756 S./ Million
 Construction Cost: 75.124 S./ Million
 O & M Cost: 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-38	0	0	39	-2		-39
2	-38	2	-0	38		0	-36
3	0	4	-1	1		1	4
4	0	5	-1	1		1	4
5	0	5	-1	1		1	4
6	0	6	-1	1		2	5
7	0	6	-1	1		2	5
8	0	6	-1	1		2	5
9	0	6	-1	1		3	6
10	0	7	-1	1		3	6
11	0	7	-1	1		3	6
12	0	7	-1	1		3	6
13	0	7	-1	1		3	6
14	0	7	-1	1		3	6
15	0	7	-1	1		3	6
16	0	7	-1	1		3	6
17							
18							
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67							
68							
69							
100	-75	88	-11	88			0

TIRS (EIRR) 0%
 社会的割引率 10%
 VANS (NPV) -35
 B/C 0.519

River: Cuenca Chancay-Lambayeque
 評価対象期間(行番号): 33
 Construction Term: 6 years
 Evaluation Term: 20 years
 Annual Average Benefit: 5.859 S./ Million
 Construction Cost: 85.588 S./ Million
 O & M Cost: 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-14	0	0	16	-2		-16
2	-14	1	-0	14		0	-13
3	-14	3	-0	15		1	-12
4	-14	4	-0	15		1	-11
5	-14	5	-1	15		1	-10
6	-14	7	-1	15		2	-8
7	0	8	-1	1		2	7
8	0	8	-1	1		2	7
9	0	8	-1	1		3	8
10	0	9	-1	1		3	8
11	0	9	-1	1		3	8
12	0	9	-1	1		3	8
13	0	9	-1	1		3	8
14	0	9	-1	1		3	8
15	0	9	-1	1		3	8
16	0	9	-1	1		3	8
17	0	9	-1	1		3	8
18	0	9	-1	1		3	8
19	0	9	-1	1		3	8
20	0	9	-1	1		3	8
21							
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67							
68							
69							
100	-86	142	-14	102			41

TIRS (EIRR) 5%
 社会的割引率 10%
 VANS (NPV) -20
 B/C 0.709

River Cuenca Chancay-Lambayeque
 評価対象期間(行番号) Construction Term : 7 years
 34 Evaluation Term : 21 years
 Annual Average Benefit: 8.307 S/. Million
 Construction Cost: 103.424 S/. Million
 O & M Cost: 1 %

Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-15	0	0	15	-2		-17
2	-15	1	-0	15		0	-13
3	-15	3	-0	15		1	-12
4	-15	5	-0	15		1	-11
5	-15	6	-1	15		1	-9
6	-15	8	-1	16		2	-8
7	-15	9	-1	16		2	-6
8	0	11	-1	1		2	10
9	0	11	-1	1		3	10
10	0	11	-1	1		3	10
11	0	11	-1	1		3	10
12	0	11	-1	1		3	10
13	0	11	-1	1		3	10
14	0	11	-1	1		3	10
15	0	11	-1	1		3	10
16	0	11	-1	1		3	10
17	0	11	-1	1		3	10
18	0	11	-1	1		3	10
19	0	11	-1	1		3	10
20	0	11	-1	1		3	10
21	0	11	-1	1		3	10
22							
23							
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65							
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67							
68							
69							
100	-103	190	-18	123			67

TIRS (EIRR) 6%
 社会的割引率 10%
 VANS (NPV) -18
 B/C 0.780

River Cuenca Chancay-Lambayeque
 評価対象期間(行番号) Construction Term : 9 years
 36 Evaluation Term : 23 years
 Annual Average Benefit: 10.396 S/. Million
 Construction Cost: 155.203 S/. Million
 O & M Cost: 1 %

Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-17	0	0	17	-2		-19
2	-17	1	-0	17		0	-16
3	-17	3	-0	18		1	-15
4	-17	4	-1	18		1	-13
5	-17	6	-1	18		1	-12
6	-17	8	-1	18		2	-10
7	-17	9	-1	18		2	-9
8	-17	10	-1	18		2	-8
9	-17	12	-1	19		3	-7
10	0	13	-2	2		3	12
11	0	13	-2	2		3	12
12	0	13	-2	2		3	12
13	0	13	-2	2		3	12
14	0	13	-2	2		3	12
15	0	13	-2	2		3	12
16	0	13	-2	2		3	12
17	0	13	-2	2		3	12
18	0	13	-2	2		3	12
19	0	13	-2	2		3	12
20	0	13	-2	2		3	12
21	0	13	-2	2		3	12
22	0	13	-2	2		3	12
23	0	13	-2	2		3	12
24							
25							
26							
27							
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63							
64							
65							
66							
67							
68							
69							
100	-155	242	-28	185			57

TIRS (EIRR) 4%
 社会的割引率 10%
 VANS (NPV) -38
 B/C 0.650

River: Cuenca Piura + Chira
 評価対象期間(行番号): 59
 Construction Term: 26 years
 Evaluation Term: 46 years
 Annual Average Benefit: 20.776 S./ Million
 Construction Cost: 647.599 S./ Million
 O & M Cost: 1 %

Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-25	0	0	29	-4		-29	
2	-25	1	-0	29	-4	1	-28	
3	-25	3	-0	29	-3	2	-25	
4	-25	6	-1	26	0	3	-20	
5	-25	9	-1	26	0	5	-17	
6	-25	12	-1	26		8	-15	
7	-25	14	-1	26		10	-12	
8	-25	17	-2	27		11	-10	
9	-25	19	-2	27		12	-8	
10	-25	21	-2	27		13	-7	
11	-25	23	-2	27		15	-5	
12	-25	24	-3	28		15	-3	
13	-25	25	-3	28		16	-3	
14	-25	26	-3	28		16	-2	
15	-25	27	-3	28		16	-2	
16	-25	28	-4	29		16	-1	
17	-25	28	-4	29		16	-0	
18	-25	29	-4	29		16	0	
19	-25	30	-4	29		16	1	
20	-25	31	-5	30		16	1	
21	-25	32	-5	30		16	2	
22	-25	32	-5	30		16	2	
23	-25	33	-5	30		16	3	
24	-25	34	-6	31		16	3	
25	-25	35	-6	31		16	4	
26	-25	36	-6	31		16	5	
27	0	36	-6	6		16	30	
28	0	36	-6	6		16	30	
29	0	36	-6	6		16	30	
30	0	36	-6	6		16	30	
31	0	36	-6	6		16	30	
32	0	36	-6	6		16	30	
33	0	36	-6	6		16	30	
34	0	36	-6	6		16	30	
35	0	36	-6	6		16	30	
36	0	36	-6	6		16	30	
37	0	36	-6	6		16	30	
38	0	36	-6	6		16	30	
39	0	36	-6	6		16	30	
40	0	36	-6	6		16	30	
41	0	36	-6	6		16	30	
42	0	36	-6	6		16	30	
43	0	36	-6	6		16	30	
44	0	36	-6	6		16	30	
45	0	36	-6	6		16	30	
46	0	36	-6	6		16	30	
47								
48								
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58								
59								
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61								
62								
63								
64								
65								
66								
67								
68								
69								
100	-648	1,304	-210	870			434	
							TIRS (EIRR)	4%
							社会的割引率	10%
							VANS (NPV)	-99
							B/C	0.619

River: Cuenca Piura + Chira
 評価対象期間(行番号): 28
 Construction Term: 1 years
 Evaluation Term: 15 years
 Annual Average Benefit: 0.881 S./ Million
 Construction Cost: 1.165 S./ Million
 O & M Cost: 1 %

Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-1	0	0	5	-4		-5	
2	0	1	-0	4	-4	1	-3	
3	0	3	-0	3	-3	2	-1	
4	0	4	-0	0	0	3	4	
5	0	6	-0	0	0	5	6	
6	0	8	-0	0	0	8	8	
7	0	10	-0	0	0	10	10	
8	0	12	-0	0	0	11	12	
9	0	13	-0	0	0	12	13	
10	0	14	-0	0	0	13	14	
11	0	16	-0	0	0	15	15	
12	0	16	-0	0	0	15	16	
13	0	17	-0	0	0	16	17	
14	0	17	-0	0	0	16	17	
15	0	17	-0	0	0	16	17	
16								
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64								
65								
66								
67								
68								
69								
100	-1	154	-0	13			141	
							TIRS (EIRR)	48%
							社会的割引率	10%
							VANS (NPV)	50
							B/C	5.605

River: Cuenca Piura + Chira
 評価対象期間(行番号): 29
 Construction Term: 2 years
 Evaluation Term: 16 years
 Annual Average Benefit: 5.068 S./ Million
 Construction Cost: 524.429 S./ Million
 O & M Cost: 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-262	0	0	266	-4		-266	
2	-262	3	-3	269	-4	1	-266	
3	0	7	-5	8	-3	2	-2	
4	0	8	-5	5	0	3	3	
5	0	10	-5	5	0	5	5	
6	0	13	-5	5		8	7	
7	0	15	-5	5		10	9	
8	0	16	-5	5		11	11	
9	0	17	-5	5		12	12	
10	0	18	-5	5		13	13	
11	0	20	-5	5		15	14	
12	0	20	-5	5		15	15	
13	0	21	-5	5		16	16	
14	0	21	-5	5		16	16	
15	0	21	-5	5		16	16	
16	0	21	-5	5		16	16	
17								
18								
19								
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63								
64								
65								
66								
67								
68								
69								
100	-524	231	-76	612			-381	
							TIRS (EIRR)	-11%
							社会的割引率	10%
							VANS (NPV)	-408
							B/C	0.182

River: Cuenca Piura + Chira
 評価対象期間(行番号): 51
 Construction Term: 24 years
 Evaluation Term: 38 years
 Annual Average Benefit: 9.908 S./ Million
 Construction Cost: 546.856 S./ Million
 O & M Cost: 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)	
1	-23	0	0	27	-4		-27	
2	-23	1	-0	27	-4	1	-26	
3	-23	3	-0	26	-3	2	-24	
4	-23	5	-1	23	0	3	-19	
5	-23	7	-1	24	0	5	-17	
6	-23	10	-1	24		8	-14	
7	-23	12	-1	24		10	-12	
8	-23	14	-2	24		11	-10	
9	-23	16	-2	25		12	-9	
10	-23	17	-2	25		13	-8	
11	-23	19	-2	25		15	-6	
12	-23	20	-3	25		15	-5	
13	-23	21	-3	26		16	-5	
14	-23	21	-3	26		16	-5	
15	-23	21	-3	26		16	-5	
16	-23	22	-3	26		16	-4	
17	-23	22	-4	26		16	-4	
18	-23	23	-4	27		16	-4	
19	-23	23	-4	27		16	-4	
20	-23	24	-4	27		16	-4	
21	-23	24	-5	27		16	-3	
22	-23	24	-5	28		16	-3	
23	-23	25	-5	28		16	-3	
24	-23	25	-5	28		16	-3	
25	0	26	-5	5		16	20	
26	0	26	-5	5		16	20	
27	0	26	-5	5		16	20	
28	0	26	-5	5		16	20	
29	0	26	-5	5		16	20	
30	0	26	-5	5		16	20	
31	0	26	-5	5		16	20	
32	0	26	-5	5		16	20	
33	0	26	-5	5		16	20	
34	0	26	-5	5		16	20	
35	0	26	-5	5		16	20	
36	0	26	-5	5		16	20	
37	0	26	-5	5		16	20	
38	0	26	-5	5		16	20	
39								
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61								
62								
63								
64								
65								
66								
67								
68								
69								
100	-547	756	-139	698			58	
							TIRS (EIRR)	1%
							社会的割引率	10%
							VANS (NPV)	-111
							B/C	0.524

River Cuenca Piura + Chira
 評価対象期間(行番号) 52 Construction Term : 25 years
 Evaluation Term : 39 years
 Annual Average Benefit: 16.767 S/. Million
 Construction Cost: 593.363 S/. Million
 O & M Cost : 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-24	0	0	28	-4		-28	
2	-24	1	-0	28	-4	1	-27	
3	-24	3	-0	27	-3	2	-27	
4	-24	5	-1	24	0	3	-19	
5	-24	8	-1	25	0	5	-17	
6	-24	11	-1	25		8	-14	
7	-24	14	-1	25		10	-12	
8	-24	16	-2	25		11	-10	
9	-24	18	-2	26		12	-8	
10	-24	19	-2	26		13	-6	
11	-24	21	-2	26		15	-5	
12	-24	23	-3	26		15	-4	
13	-24	24	-3	27		16	-3	
14	-24	24	-3	27		16	-2	
15	-24	25	-3	27		16	-2	
16	-24	26	-4	27		16	-2	
17	-24	26	-4	28		16	-1	
18	-24	27	-4	28		16	-1	
19	-24	28	-4	28		16	-0	
20	-24	28	-5	28		16	0	
21	-24	29	-5	28		16	1	
22	-24	30	-5	29		16	1	
23	-24	30	-5	29		16	1	
24	-24	31	-5	29		16	2	
25	-24	32	-6	29		16	2	
26	0	32	-6	6		16	27	
27	0	32	-6	6		16	27	
28	0	32	-6	6		16	27	
29	0	32	-6	6		16	27	
30	0	32	-6	6		16	27	
31	0	32	-6	6		16	27	
32	0	32	-6	6		16	27	
33	0	32	-6	6		16	27	
34	0	32	-6	6		16	27	
35	0	32	-6	6		16	27	
36	0	32	-6	6		16	27	
37	0	32	-6	6		16	27	
38	0	32	-6	6		16	27	
39	0	32	-6	6		16	27	
40								
41								
42								
43								
44								
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59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
100	-593	955	-154	759			195	
							TIRS (EIRR)	3%
							社会的割引率	10%
							VANS (NPV)	-100
							B/C	0.592

添付-8-111

River Cuenca Piura + Chira
 評価対象期間(行番号) 57 Construction Term : 28 years
 Evaluation Term : 44 years
 Annual Average Benefit: 23.672 S/. Million
 Construction Cost: 755.396 S/. Million
 O & M Cost : 1 %

100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)	
1	-27	0	0	31	-4		-31	
2	-27	1	-0	31	-4	1	-30	
3	-27	3	-1	31	-3	2	-27	
4	-27	6	-1	28	0	3	-22	
5	-27	9	-1	28	0	5	-19	
6	-27	12	-1	28		8	-16	
7	-27	15	-2	29		10	-14	
8	-27	17	-2	29		11	-12	
9	-27	19	-2	29		12	-10	
10	-27	21	-2	29		13	-8	
11	-27	23	-3	30		15	-7	
12	-27	25	-3	30		15	-5	
13	-27	26	-3	30		16	-4	
14	-27	27	-4	30		16	-4	
15	-27	28	-4	31		16	-3	
16	-27	28	-4	31		16	-3	
17	-27	29	-4	31		16	-2	
18	-27	30	-5	32		16	-1	
19	-27	31	-5	32		16	-1	
20	-27	32	-5	32		16	-0	
21	-27	33	-5	32		16	0	
22	-27	33	-6	33		16	1	
23	-27	34	-6	33		16	1	
24	-27	35	-6	33		16	2	
25	-27	36	-6	33		16	3	
26	-27	37	-7	34		16	3	
27	-27	38	-7	34		16	4	
28	-27	39	-7	34		16	4	
29	0	39	-8	8		16	32	
30	0	39	-8	8		16	32	
31	0	39	-8	8		16	32	
32	0	39	-8	8		16	32	
33	0	39	-8	8		16	32	
34	0	39	-8	8		16	32	
35	0	39	-8	8		16	32	
36	0	39	-8	8		16	32	
37	0	39	-8	8		16	32	
38	0	39	-8	8		16	32	
39	0	39	-8	8		16	32	
40	0	39	-8	8		16	32	
41	0	39	-8	8		16	32	
42	0	39	-8	8		16	32	
43	0	39	-8	8		16	32	
44	0	39	-8	8		16	32	
45								
46								
47								
48								
49								
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52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
100	-755	1,295	-223	990			306	
							TIRS (EIRR)	3%
							社会的割引率	10%
							VANS (NPV)	-120
							B/C	0.579

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 0.294 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	4	-4	-2	-4
2	0	1	-0	2	-2	1	-2
3	0	2	-0	0	2	2	2
4	0	3	-0	0	3	3	3
5	0	4	-0	0	4	4	4
6	0	6	-0	0	5	5	6
7	0	7	-0	0	6	6	7
8	0	7	-0	0	7	7	7
9	0	8	-0	0	8	8	8
10	0	9	-0	0	9	9	9
11	0	10	-0	0	9	10	10
12	0	10	-0	0	10	10	10
13	0	10	-0	0	10	10	10
14	0	10	-0	0	10	10	10
15	0	10	-0	0	10	10	10
16					10		10
17					10		10
18					10		10
19					10		10
20					10		10
21					10		10
22					10		10
23					10		10
24					10		10
25					10		10
26					10		10
27					10		10
28					10		10
29					10		10
30					10		10
31					10		10
32					10		10
33					10		10
34					10		10
35					10		10
36					10		10
37					10		10
38					10		10
39					10		10
40					10		10
41					10		10
42					10		10
43					10		10
44					10		10
45					10		10
46					10		10
47					10		10
48					10		10
49					10		10
50					10		10
51					0		0
52					0		0
53					0		0
54					0		0
55					0		0
56					0		0
57					0		0
58					0		0
59					0		0
60					0		0
61					0		0
62					0		0
63					0		0
64					0		0
65					0		0
66					0		0
67					0		0
68					0		0
69					0		0
100	-0	95	-0	6			90
					TIRS (EIRR)		54%
					社会的割引率		10%
					VANS (NPV)		33
					B/C		7.234

River Cuenca Ica

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 5.948 S/. Million
 Construction Cost: 0.000 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-0	0	0	4	-4	-2	-4
2	0	6	-0	2	-2	1	4
3	0	7	-0	0	7	2	7
4	0	9	-0	0	9	3	9
5	0	10	-0	0	10	4	10
6	0	11	-0	0	11	5	11
7	0	12	-0	0	12	6	12
8	0	13	-0	0	13	7	13
9	0	14	-0	0	14	8	14
10	0	15	-0	0	15	9	15
11	0	15	-0	0	15	9	15
12	0	16	-0	0	16	10	16
13	0	16	-0	0	16	10	16
14	0	16	-0	0	16	10	16
15	0	16	-0	0	16	10	16
16					16		16
17					16		16
18					16		16
19					16		16
20					16		16
21					16		16
22					16		16
23					16		16
24					16		16
25					16		16
26					16		16
27					16		16
28					16		16
29					16		16
30					16		16
31					16		16
32					16		16
33					16		16
34					16		16
35					16		16
36					16		16
37					16		16
38					16		16
39					16		16
40					16		16
41					16		16
42					16		16
43					16		16
44					16		16
45					16		16
46					16		16
47					16		16
48					16		16
49					16		16
50					16		16
51					0		0
52					0		0
53					0		0
54					0		0
55					0		0
56					0		0
57					0		0
58					0		0
59					0		0
60					0		0
61					0		0
62					0		0
63					0		0
64					0		0
65					0		0
66					0		0
67					0		0
68					0		0
69					0		0
100	-0	175	-0	6			169
					TIRS (EIRR)		158%
					社会的割引率		10%
					VANS (NPV)		71
					B/C		14.462

River Cuenca Ica

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 9.949 S./ Million
 Construction Cost: 55.552 S./ Million
 O & M Cost : 1 %

10-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-19	0	0	22	-4		-22
2	-19	4	-0	21	-2	1	-17
3	-19	8	-0	19		2	-11
4	0	13	-1	1		3	12
5	0	14	-1	1		4	13
6	0	15	-1	1		5	15
7	0	16	-1	1		6	16
8	0	17	-1	1		7	16
9	0	18	-1	1		8	17
10	0	19	-1	1		9	18
11	0	19	-1	1		9	19
12	0	20	-1	1		10	19
13	0	20	-1	1		10	19
14	0	20	-1	1		10	19
15	0	20	-1	1		10	19
16	0	20	-1	1		10	19
17	0	20	-1	1		10	19
18						10	10
19						10	10
20						10	10
21						10	10
22						10	10
23						10	10
24						10	10
25						10	10
26						10	10
27						10	10
28						10	10
29						10	10
30						10	10
31						10	10
32						10	10
33						10	10
34						10	10
35						10	10
36						10	10
37						10	10
38						10	10
39						10	10
40						10	10
41						10	10
42						10	10
43						10	10
44						10	10
45						10	10
46						10	10
47						10	10
48						10	10
49						10	10
50						10	10
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-56	260	-8	70		0	190

TIRS (EIRR) 22%
 社会的割引率 10%
 VANS (NPV) 48
 B/C 1.874

添付-8-113

River Cuenca Ica

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 14.585 S./ Million
 Construction Cost: 55.989 S./ Million
 O & M Cost : 1 %

25-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-19	0	0	22	-4		-22
2	-19	5	-0	21	-2	1	-16
3	-19	11	-0	19		2	-8
4	0	17	-1	1		3	17
5	0	19	-1	1		4	18
6	0	20	-1	1		5	19
7	0	21	-1	1		6	20
8	0	22	-1	1		7	21
9	0	22	-1	1		8	22
10	0	23	-1	1		9	23
11	0	24	-1	1		9	23
12	0	24	-1	1		10	24
13	0	24	-1	1		10	24
14	0	24	-1	1		10	24
15	0	24	-1	1		10	24
16	0	24	-1	1		10	24
17	0	24	-1	1		10	24
18						10	10
19						10	10
20						10	10
21						10	10
22						10	10
23						10	10
24						10	10
25						10	10
26						10	10
27						10	10
28						10	10
29						10	10
30						10	10
31						10	10
32						10	10
33						10	10
34						10	10
35						10	10
36						10	10
37						10	10
38						10	10
39						10	10
40						10	10
41						10	10
42						10	10
43						10	10
44						10	10
45						10	10
46						10	10
47						10	10
48						10	10
49						10	10
50						10	10
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-56	329	-8	70		0	259

TIRS (EIRR) 29%
 社会的割引率 10%
 VANS (NPV) 77
 B/C 2.391

River Cuenca Ica

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 16.933 S/. Million
 Construction Cost: 68.239 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-23	0	0	26	-4		-26
2	-23	6	-0	25	-2	1	-19
3	-23	13	-0	23		2	-10
4	0	20	-1	1		3	19
5	0	21	-1	1		4	20
6	0	22	-1	1		5	22
7	0	23	-1	1		6	23
8	0	24	-1	1		7	24
9	0	25	-1	1		8	24
10	0	25	-1	1		9	25
11	0	26	-1	1		9	26
12	0	27	-1	1		10	26
13	0	27	-1	1		10	26
14	0	27	-1	1		10	26
15	0	27	-1	1		10	26
16	0	27	-1	1		10	26
17	0	27	-1	1		10	26
18						10	
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-68	365	-10	84			280

TIRS (EIRR) 27%
 社会的割引率 10%
 VANS (NPV) 81
 B/C 2.220

River Cuenca Ica

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 18.433 S/. Million
 Construction Cost: 83.521 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-21	0	0	24	-4		-24
2	-21	5	-0	23	-2	1	-18
3	-21	11	-0	21		2	-11
4	-21	16	-1	22		3	-5
5	0	22	-1	1		4	22
6	0	24	-1	1		5	23
7	0	25	-1	1		6	24
8	0	26	-1	1		7	25
9	0	26	-1	1		8	25
10	0	27	-1	1		9	26
11	0	28	-1	1		9	27
12	0	28	-1	1		10	27
13	0	28	-1	1		10	27
14	0	28	-1	1		10	27
15	0	28	-1	1		10	27
16	0	28	-1	1		10	27
17	0	28	-1	1		10	27
18	0	28	-1	1		10	27
19						10	
20						10	
21						10	
22						10	
23						10	
24						10	
25						10	
26						10	
27						10	
28						10	
29						10	
30						10	
31						10	
32						10	
33						10	
34						10	
35						10	
36						10	
37						10	
38						10	
39						10	
40						10	
41						10	
42						10	
43						10	
44						10	
45						10	
46						10	
47						10	
48						10	
49						10	
50						10	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-84	406	-13	102			303

TIRS (EIRR) 25%
 社会的割引率 10%
 VANS (NPV) 78
 B/C 2.019

River Cuenca Mantaro

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 1.968 S./ Million
 Construction Cost: 26.208 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	30	-4	-4	-30
2	0	3	-0	4	-4	1	-1
3	0	4	-0	2	-2	2	2
4	0	5	-0	0		3	5
5	0	7	-0	0		5	7
6	0	9	-0	0		7	9
7	0	11	-0	0		9	11
8	0	12	-0	0		10	12
9	0	13	-0	0		11	13
10	0	14	-0	0		12	14
11	0	15	-0	0		13	15
12	0	16	-0	0		14	16
13	0	16	-0	0		14	16
14	0	16	-0	0		14	16
15	0	16	-0	0		14	16
16						14	14
17						14	14
18						14	14
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-26	157	-4	39		0	119

TIRS (EIRR) 21%
 社会的割引率 10%
 VANS (NPV) 30
 B/C 1.916

River Cuenca Mantaro

Construction Term : 2 years
 Evaluation Term : 16 years
 Annual Average Benefit: 5.229 S./ Million
 Construction Cost: 51.454 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	29	-4	-4	-29
2	-26	3	-0	30	-4	1	-26
3	0	7	-1	2	-2	2	5
4	0	9	-1	1		3	8
5	0	10	-1	1		5	10
6	0	12	-1	1		7	12
7	0	14	-1	1		9	14
8	0	15	-1	1		10	15
9	0	16	-1	1		11	16
10	0	17	-1	1		12	17
11	0	19	-1	1		13	18
12	0	19	-1	1		14	19
13	0	19	-1	1		14	19
14	0	19	-1	1		14	19
15	0	19	-1	1		14	19
16	0	19	-1	1		14	19
17						14	14
18						14	14
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-51	220	-7	68		0	152

TIRS (EIRR) 18%
 社会的割引率 10%
 VANS (NPV) 32
 B/C 1.572

River Cuenca Mantaro

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 6.884 S./ Million
 Construction Cost: 89.602 S./ Million
 O & M Cost : 1 %

10-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-22	0	0	26	-4		-26
2	-22	2	-0	26	-4	1	-24
3	-22	5	-0	25	-2	2	-19
4	-22	8	-1	23		3	-15
5	0	12	-1	1		5	11
6	0	14	-1	1		7	13
7	0	16	-1	1		9	15
8	0	17	-1	1		10	16
9	0	18	-1	1		11	17
10	0	19	-1	1		12	18
11	0	20	-1	1		13	19
12	0	21	-1	1		14	20
13	0	21	-1	1		14	20
14	0	21	-1	1		14	20
15	0	21	-1	1		14	20
16	0	21	-1	1		14	20
17	0	21	-1	1		14	20
18	0	21	-1	1		14	20
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-90	279	-14	112			167

TIRS (EIRR) 13%
 社会的割引率 10%
 VANS (NPV) 17
 B/C 1.200

River Cuenca Mantaro

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 7.993 S./ Million
 Construction Cost: 90.372 S./ Million
 O & M Cost : 1 %

25-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-23	0	0	26	-4		-26
2	-23	3	-0	26	-4	1	-24
3	-23	6	-0	25	-2	2	-19
4	-23	9	-1	23		3	-14
5	0	13	-1	1		5	12
6	0	15	-1	1		7	14
7	0	17	-1	1		9	16
8	0	18	-1	1		10	17
9	0	19	-1	1		11	18
10	0	20	-1	1		12	19
11	0	21	-1	1		13	20
12	0	22	-1	1		14	21
13	0	22	-1	1		14	21
14	0	22	-1	1		14	21
15	0	22	-1	1		14	21
16	0	22	-1	1		14	21
17	0	22	-1	1		14	21
18	0	22	-1	1		14	21
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-90	296	-14	113			183

TIRS (EIRR) 14%
 社会的割引率 10%
 VANS (NPV) 23
 B/C 1.271

River Cuenca Mantaro

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 8,380 S/. Million
 Construction Cost: 93,893 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-23	0	0	27	-4		-27
2	-23	3	-0	27	-4	1	-25
3	-23	6	-0	26	-2	2	-20
4	-23	10	-1	24		3	-15
5	0	13	-1	1		5	13
6	0	15	-1	1		7	15
7	0	17	-1	1		9	16
8	0	18	-1	1		10	18
9	0	20	-1	1		11	19
10	0	21	-1	1		12	20
11	0	22	-1	1		13	21
12	0	22	-1	1		14	21
13	0	23	-1	1		14	22
14	0	23	-1	1		14	22
15	0	23	-1	1		14	22
16	0	23	-1	1		14	22
17	0	23	-1	1		14	22
18	0	23	-1	1		14	22
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-94	302	-15	117			185

TIRS (EIRR) 14%
 社会的割引率 10%
 VANS (NPV) 22
 B/C 1.254

River Cuenca Mantaro

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 8,584 S/. Million
 Construction Cost: 104,245 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-26	0	0	30	-4		-30
2	-26	3	-0	30	-4	1	-27
3	-26	6	-1	28	-2	2	-22
4	-26	10	-1	27		3	-17
5	0	14	-1	1		5	13
6	0	16	-1	1		7	15
7	0	17	-1	1		9	16
8	0	19	-1	1		10	18
9	0	20	-1	1		11	19
10	0	21	-1	1		12	20
11	0	22	-1	1		13	21
12	0	23	-1	1		14	22
13	0	23	-1	1		14	22
14	0	23	-1	1		14	22
15	0	23	-1	1		14	22
16	0	23	-1	1		14	22
17	0	23	-1	1		14	22
18	0	23	-1	1		14	22
19						14	14
20						14	14
21						14	14
22						14	14
23						14	14
24						14	14
25						14	14
26						14	14
27						14	14
28						14	14
29						14	14
30						14	14
31						14	14
32						14	14
33						14	14
34						14	14
35						14	14
36						14	14
37						14	14
38						14	14
39						14	14
40						14	14
41						14	14
42						14	14
43						14	14
44						14	14
45						14	14
46						14	14
47						14	14
48						14	14
49						14	14
50						14	14
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-104	305	-16	129			176

TIRS (EIRR) 12%
 社会的割引率 10%
 VANS (NPV) 15
 B/C 1.152

添付-8-117

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 82,489 S./ Million
 Construction Cost: 234,707 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-23	0	0	27	-4		-27
2	-23	9	-0	27	-4	1	-19
3	-23	18	-0	28	-4	2	-9
4	-23	28	-1	27	-3	4	2
5	-23	39	-1	24		6	15
6	-23	50	-1	25		9	26
7	-23	61	-1	25		12	36
8	-23	72	-2	25		14	47
9	-23	82	-2	25		16	57
10	-23	92	-2	26		18	66
11	0	102	-2	2		19	99
12	0	103	-2	2		20	101
13	0	104	-2	2		21	101
14	0	104	-2	2		21	102
15	0	104	-2	2		21	102
16	0	104	-2	2		21	102
17	0	104	-2	2		21	102
18	0	104	-2	2		21	102
19	0	104	-2	2		21	102
20	0	104	-2	2		21	102
21	0	104	-2	2		21	102
22	0	104	-2	2		21	102
23	0	104	-2	2		21	102
24	0	104	-2	2		21	102
25						21	
26						21	
27						21	
28						21	
29						21	
30						21	
31						21	
32						21	
33						21	
34						21	
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-235	1,902	-43	292			1,611

TIRS (EIRR) 37%
 社会的割引率 10%
 VANS (NPV) 355
 B/C 1.451

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 14 years
 Evaluation Term : 28 years
 Annual Average Benefit: 202,073 S./ Million
 Construction Cost: 365,775 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-26	0	0	30	-4		-30
2	-26	15	-0	30	-4	1	-15
3	-26	31	-1	30	-4	2	0
4	-26	47	-1	30	-3	4	17
5	-26	64	-1	27		6	37
6	-26	81	-1	27		9	54
7	-26	98	-2	28		12	71
8	-26	115	-2	28		14	87
9	-26	131	-2	28		16	103
10	-26	147	-2	28		18	119
11	-26	164	-3	29		19	135
12	-26	179	-3	29		20	150
13	-26	194	-3	29		21	165
14	-26	209	-3	30		21	180
15	0	224	-4	4		21	220
16	0	224	-4	4		21	220
17	0	224	-4	4		21	220
18	0	224	-4	4		21	220
19	0	224	-4	4		21	220
20	0	224	-4	4		21	220
21	0	224	-4	4		21	220
22	0	224	-4	4		21	220
23	0	224	-4	4		21	220
24	0	224	-4	4		21	220
25	0	224	-4	4		21	220
26	0	224	-4	4		21	220
27	0	224	-4	4		21	220
28	0	224	-4	4		21	220
29						21	
30						21	
31						21	
32						21	
33						21	
34						21	
35						21	
36						21	
37						21	
38						21	
39						21	
40						21	
41						21	
42						21	
43						21	
44						21	
45						21	
46						21	
47						21	
48						21	
49						21	
50						21	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-366	4,605	-75	454			4,150

TIRS (EIRR) 54%
 社会的割引率 10%
 VANS (NPV) 809
 B/C 4.678

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba							
		Construction Term :		40 years			
		Evaluation Term :		54 years			
		Annual Average Benefit:		259,756 S./ Million			
		Construction Cost:		1,212,393 S./ Million			
		O & M Cost :		1 %			
10-Year	Construction	Benefit	O & M Cost	Total Cost	P/C	P/C	Total
Year	Cost (S./ Million)	(S./ Million)	(S./ Million)	(S./ Million)	Cost	Benefit	(S./ Million)
1	-30	0	0	34	-4		-34
2	-30	7	-0	34	-4	1	-27
3	-30	15	-1	35	-4	2	-20
4	-30	23	-1	34	-3	4	-11
5	-30	32	-1	32		6	1
6	-30	41	-2	32		9	10
7	-30	51	-2	32		12	18
8	-30	59	-2	32		14	27
9	-30	68	-2	33		16	35
10	-30	76	-3	33		18	43
11	-30	84	-3	33		19	51
12	-30	92	-3	34		20	58
13	-30	99	-4	34		21	65
14	-30	106	-4	34		21	72
15	-30	112	-4	35		21	78
16	-30	119	-5	35		21	84
17	-30	125	-5	35		21	90
18	-30	132	-5	35		21	96
19	-30	138	-5	36		21	103
20	-30	145	-6	36		21	109
21	-30	151	-6	36		21	115
22	-30	158	-6	37		21	121
23	-30	164	-7	37		21	127
24	-30	171	-7	37		21	134
25	-30	177	-7	38		21	140
26	-30	184	-8	38		21	146
27	-30	190	-8	38		21	152
28	-30	197	-8	38		21	158
29	-30	203	-8	39		21	164
30	-30	210	-9	39		21	171
31	-30	216	-9	39		21	177
32	-30	223	-9	40		21	183
33	-30	229	-10	40		21	189
34	-30	236	-10	40		21	195
35	-30	242	-10	41		21	202
36	-30	249	-11	41		21	208
37	-30	255	-11	41		21	214
38	-30	262	-11	42		21	220
39	-30	268	-12	42		21	226
40	-30	275	-12	42		21	233
41	0	281	-12	12		21	269
42	0	281	-12	12		21	269
43	0	281	-12	12		21	269
44	0	281	-12	12		21	269
45	0	281	-12	12		21	269
46	0	281	-12	12		21	269
47	0	281	-12	12		21	269
48	0	281	-12	12		21	269
49	0	281	-12	12		21	269
50	0	281	-12	12		21	269
51	0	260	-12	12		0	248
52	0	260	-12	12		0	248
53	0	260	-12	12		0	248
54	0	260	-12	12		0	248
55	0					0	
56	0					0	
57	0					0	
58	0					0	
59	0					0	
60	0					0	
61	0					0	
62	0					0	
63	0					0	
64	0					0	
65	0					0	
66	0					0	
67	0					0	
68	0					0	
69	0					0	
100	-1,212	9,636	-406	1,632			8,004

TIRS (EIRR) 24%
 社会的割引率 10%
 VANS (NPV) 402
 B/C 2.198

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba							
		Construction Term :		45 years			
		Evaluation Term :		59 years			
		Annual Average Benefit:		302,876 S./ Million			
		Construction Cost:		1,298,499 S./ Million			
		O & M Cost :		1 %			
25-Year	Construction	Benefit	O & M Cost	Total Cost	P/C	P/C	Total
Year	Cost (S./ Million)	(S./ Million)	(S./ Million)	(S./ Million)	Cost	Benefit	(S./ Million)
1	-29	0	0	32	-4		-32
2	-29	7	-0	33	-4	1	-25
3	-29	15	-1	33	-4	2	-18
4	-29	24	-1	32	-3	4	-9
5	-29	33	-1	30		6	3
6	-29	43	-1	30		9	12
7	-29	52	-2	31		12	21
8	-29	61	-2	31		14	30
9	-29	70	-2	31		16	39
10	-29	78	-3	31		18	47
11	-29	86	-3	32		19	55
12	-29	94	-3	32		20	62
13	-29	102	-3	32		21	70
14	-29	109	-4	33		21	76
15	-29	116	-4	33		21	83
16	-29	122	-4	33		21	89
17	-29	129	-5	33		21	96
18	-29	136	-5	34		21	102
19	-29	143	-5	34		21	109
20	-29	149	-5	34		21	115
21	-29	156	-6	35		21	121
22	-29	163	-6	35		21	128
23	-29	170	-6	35		21	134
24	-29	176	-7	35		21	141
25	-29	183	-7	36		21	147
26	-29	190	-7	36		21	154
27	-29	196	-8	36		21	160
28	-29	203	-8	37		21	167
29	-29	210	-8	37		21	173
30	-29	217	-8	37		21	179
31	-29	223	-9	38		21	186
32	-29	230	-9	38		21	192
33	-29	237	-9	38		21	199
34	-29	244	-10	38		21	205
35	-29	250	-10	39		21	212
36	-29	257	-10	39		21	218
37	-29	264	-10	39		21	224
38	-29	270	-11	40		21	231
39	-29	277	-11	40		21	237
40	-29	284	-11	40		21	244
41	-29	291	-12	40		21	250
42	-29	297	-12	41		21	257
43	-29	304	-12	41		21	263
44	-29	311	-12	41		21	270
45	-29	318	-13	42		21	276
46	0	324	-13	13		21	311
47	0	324	-13	13		21	311
48	0	324	-13	13		21	311
49	0	324	-13	13		21	311
50	0	324	-13	13		21	311
51	0	303	-13	13		0	290
52	0	303	-13	13		0	290
53	0	303	-13	13		0	290
54	0	303	-13	13		0	290
55	0	303	-13	13		0	290
56	0	303	-13	13		0	290
57	0	303	-13	13		0	290
58	0	303	-13	13		0	290
59	0	303	-13	13		0	290
60	0					0	
61	0					0	
62	0					0	
63	0					0	
64	0					0	
65	0					0	
66	0					0	
67	0					0	
68	0					0	
69	0					0	
100	-1,298	11,837	-467	1,779			10,058

TIRS (EIRR) 26%
 社会的割引率 10%
 VANS (NPV) 448
 B/C 2.386

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 50 years
 Evaluation Term : 64 years
 Annual Average Benefit: 320.089 S/. Million
 Construction Cost: 1,403.838 S/. Million
 O & M Cost : 1 %

50-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-28	0	0	32	-4		-32
2	-28	7	-0	32	-4	1	-25
3	-28	15	-1	32	-4	2	-18
4	-28	23	-1	32	-3	4	-9
5	-28	32	-1	29		6	3
6	-28	41	-1	29		9	11
7	-28	50	-2	30		12	20
8	-28	59	-2	30		14	29
9	-28	67	-2	30		16	37
10	-28	75	-3	31		18	45
11	-28	83	-3	31		19	52
12	-28	91	-3	31		20	60
13	-28	98	-3	31		21	66
14	-28	105	-4	32		21	73
15	-28	111	-4	32		21	79
16	-28	117	-4	32		21	85
17	-28	124	-4	33		21	91
18	-28	130	-5	33		21	97
19	-28	137	-5	33		21	104
20	-28	143	-5	33		21	110
21	-28	149	-6	34		21	116
22	-28	156	-6	34		21	122
23	-28	162	-6	34		21	128
24	-28	169	-6	35		21	134
25	-28	175	-7	35		21	140
26	-28	181	-7	35		21	146
27	-28	188	-7	35		21	153
28	-28	194	-8	36		21	159
29	-28	201	-8	36		21	165
30	-28	207	-8	36		21	171
31	-28	213	-8	37		21	177
32	-28	220	-9	37		21	183
33	-28	226	-9	37		21	189
34	-28	233	-9	37		21	195
35	-28	239	-10	38		21	201
36	-28	245	-10	38		21	208
37	-28	252	-10	38		21	214
38	-28	258	-10	38		21	220
39	-28	265	-11	39		21	226
40	-28	271	-11	39		21	232
41	-28	278	-11	39		21	238
42	-28	284	-12	40		21	244
43	-28	290	-12	40		21	250
44	-28	297	-12	40		21	257
45	-28	303	-12	40		21	263
46	-28	310	-13	41		21	269
47	-28	316	-13	41		21	275
48	-28	322	-13	41		21	281
49	-28	329	-13	42		21	287
50	-28	335	-14	42		21	293
51	0	320	-14	14	0	0	306
52	0	320	-14	14	0	0	306
53	0	320	-14	14	0	0	306
54	0	320	-14	14	0	0	306
55	0	320	-14	14	0	0	306
56	0	320	-14	14	0	0	306
57	0	320	-14	14	0	0	306
58	0	320	-14	14	0	0	306
59	0	320	-14	14	0	0	306
60	0	320	-14	14	0	0	306
61	0	320	-14	14	0	0	306
62	0	320	-14	14	0	0	306
63	0	320	-14	14	0	0	306
64	0	320	-14	14	0	0	306
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-1,404	13,257	-540	1,958			11,299

TIRS (EIRR) 25%
 社会的割引率 10%
 VANS (NPV) 430
 B/C 2.357

River Huallaga 5 cuencas, Mayo, Paraputa and Huayabamba

Construction Term : 50 years
 Evaluation Term : 64 years
 Annual Average Benefit: 329.743 S/. Million
 Construction Cost: 1,450.079 S/. Million
 O & M Cost : 1 %

100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-29	0	0	33	-4		-33
2	-29	7	-0	33	-4	1	-26
3	-29	15	-1	33	-4	2	-18
4	-29	23	-1	33	-3	4	-9
5	-29	32	-1	30		6	2
6	-29	42	-1	30		9	11
7	-29	51	-2	31		12	20
8	-29	60	-2	31		14	29
9	-29	69	-2	31		16	37
10	-29	77	-3	32		18	45
11	-29	85	-3	32		19	53
12	-29	93	-3	32		20	61
13	-29	100	-3	32		21	68
14	-29	107	-4	33		21	74
15	-29	114	-4	33		21	81
16	-29	120	-4	33		21	87
17	-29	127	-5	34		21	93
18	-29	134	-5	34		21	100
19	-29	140	-5	34		21	106
20	-29	147	-6	35		21	112
21	-29	153	-6	35		21	119
22	-29	160	-6	35		21	125
23	-29	167	-6	35		21	131
24	-29	173	-7	36		21	137
25	-29	180	-7	36		21	144
26	-29	186	-7	36		21	150
27	-29	193	-8	37		21	156
28	-29	199	-8	37		21	163
29	-29	206	-8	37		21	169
30	-29	213	-8	37		21	175
31	-29	219	-9	38		21	182
32	-29	226	-9	38		21	188
33	-29	232	-9	38		21	194
34	-29	239	-10	39		21	200
35	-29	246	-10	39		21	207
36	-29	252	-10	39		21	213
37	-29	259	-10	39		21	219
38	-29	265	-11	40		21	226
39	-29	272	-11	40		21	232
40	-29	279	-11	40		21	238
41	-29	285	-12	41		21	245
42	-29	292	-12	41		21	251
43	-29	298	-12	41		21	257
44	-29	305	-12	41		21	264
45	-29	312	-13	42		21	270
46	-29	318	-13	42		21	276
47	-29	325	-13	42		21	282
48	-29	331	-14	43		21	289
49	-29	338	-14	43		21	295
50	-29	345	-14	43		21	301
51	0	330	-15	15	0	0	315
52	0	330	-15	15	0	0	315
53	0	330	-15	15	0	0	315
54	0	330	-15	15	0	0	315
55	0	330	-15	15	0	0	315
56	0	330	-15	15	0	0	315
57	0	330	-15	15	0	0	315
58	0	330	-15	15	0	0	315
59	0	330	-15	15	0	0	315
60	0	330	-15	15	0	0	315
61	0	330	-15	15	0	0	315
62	0	330	-15	15	0	0	315
63	0	330	-15	15	0	0	315
64	0	330	-15	15	0	0	315
65	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
100	-1,450	13,629	-558	2,022			11,607

TIRS (EIRR) 25%
 社会的割引率 10%
 VANS (NPV) 438
 B/C 2.342

River Cuenca Nanay

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 17,363 S./ Million
 Construction Cost: 95,233 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-24	0	0	25	-1		-25
2	-24	4	-0	24		0	-20
3	-24	9	-0	24		0	-15
4	-24	13	-1	25		0	-11
5	0	18	-1	1		1	17
6	0	18	-1	1		1	17
7	0	18	-1	1		1	17
8	0	18	-1	1		1	17
9	0	18	-1	1		1	17
10	0	18	-1	1		1	17
11	0	19	-1	1		1	18
12	0	19	-1	1		1	18
13	0	19	-1	1		1	18
14	0	19	-1	1		1	18
15	0	19	-1	1		1	18
16	0	19	-1	1		1	18
17	0	19	-1	1		1	18
18	0	19	-1	1		1	18
19						1	1
20						1	1
21						1	1
22						1	1
23						1	1
24						1	1
25						1	1
26						1	1
27						1	1
28						1	1
29						1	1
30						1	1
31						1	1
32						1	1
33						1	1
34						1	1
35						1	1
36						1	1
37						1	1
38						1	1
39						1	1
40						1	1
41						1	1
42						1	1
43						1	1
44						1	1
45						1	1
46						1	1
47						1	1
48						1	1
49						1	1
50						1	1
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-95	284	-15	111			173

TIRS (EIRR) 16%
 社会的割引率 10%
 VANS (NPV) 30
 B/C 1.362

River Cuenca Nanay

Construction Term : 4 years
 Evaluation Term : 18 years
 Annual Average Benefit: 41,004 S./ Million
 Construction Cost: 99,127 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-25	0	0	25	-1		-25
2	-25	10	-0	25		0	-15
3	-25	21	-0	25		0	-5
4	-25	31	-1	26		0	6
5	0	42	-1	1		1	41
6	0	42	-1	1		1	41
7	0	42	-1	1		1	41
8	0	42	-1	1		1	41
9	0	42	-1	1		1	41
10	0	42	-1	1		1	41
11	0	42	-1	1		1	41
12	0	42	-1	1		1	41
13	0	42	-1	1		1	41
14	0	42	-1	1		1	41
15	0	42	-1	1		1	41
16	0	42	-1	1		1	41
17	0	42	-1	1		1	41
18	0	42	-1	1		1	41
19						1	1
20						1	1
21						1	1
22						1	1
23						1	1
24						1	1
25						1	1
26						1	1
27						1	1
28						1	1
29						1	1
30						1	1
31						1	1
32						1	1
33						1	1
34						1	1
35						1	1
36						1	1
37						1	1
38						1	1
39						1	1
40						1	1
41						1	1
42						1	1
43						1	1
44						1	1
45						1	1
46						1	1
47						1	1
48						1	1
49						1	1
50						1	1
51						0	0
52						0	0
53						0	0
54						0	0
55						0	0
56						0	0
57						0	0
58						0	0
59						0	0
60						0	0
61						0	0
62						0	0
63						0	0
64						0	0
65						0	0
66						0	0
67						0	0
68						0	0
69						0	0
100	-99	650	-15	115			535

TIRS (EIRR) 40%
 社会的割引率 10%
 VANS (NPV) 171
 B/C 3.007

River Cuenca Nanay

Construction Term : 6 years
 Evaluation Term : 20 years
 Annual Average Benefit: 54.243 S./ Million
 Construction Cost: 152.585 S./ Million
 O & M Cost : 1 %

10-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-25	0	0	26	-1		-26
2	-25	9	-0	26		0	-17
3	-25	18	-1	26		0	-8
4	-25	27	-1	26		0	1
5	-25	37	-1	26		1	10
6	-25	46	-1	27		1	19
7	0	55	-2	2		1	54
8	0	55	-2	2		1	54
9	0	55	-2	2		1	54
10	0	55	-2	2		1	54
11	0	55	-2	2		1	54
12	0	55	-2	2		1	54
13	0	55	-2	2		1	54
14	0	55	-2	2		1	54
15	0	55	-2	2		1	54
16	0	55	-2	2		1	54
17	0	55	-2	2		1	54
18	0	55	-2	2		1	54
19	0	55	-2	2		1	54
20	0	55	-2	2		1	54
21						1	
22						1	
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-153	912	-25	178			734

TIRS (EIRR) 35%
 社会的割引率 10%
 VANS (NPV) 199
 B/C 2.651

添付-8-122

River Cuenca Nanay

Construction Term : 8 years
 Evaluation Term : 22 years
 Annual Average Benefit: 65.059 S./ Million
 Construction Cost: 176.304 S./ Million
 O & M Cost : 1 %

25-Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-22	0	0	23	-1		-23
2	-22	8	-0	22		0	-14
3	-22	16	-0	22		0	-6
4	-22	25	-1	23		0	2
5	-22	33	-1	23		1	10
6	-22	41	-1	23		1	18
7	-22	50	-1	23		1	26
8	-22	58	-2	24		1	34
9	0	66	-2	2		1	64
10	0	66	-2	2		1	64
11	0	66	-2	2		1	64
12	0	66	-2	2		1	64
13	0	66	-2	2		1	64
14	0	66	-2	2		1	64
15	0	66	-2	2		1	64
16	0	66	-2	2		1	64
17	0	66	-2	2		1	64
18	0	66	-2	2		1	64
19	0	66	-2	2		1	64
20	0	66	-2	2		1	64
21	0	66	-2	2		1	64
22	0	66	-2	2		1	64
23						1	
24						1	
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-176	1,158	-31	208			950

TIRS (EIRR) 36%
 社会的割引率 10%
 VANS (NPV) 232
 B/C 2.815

River Cuenca Nanay

Construction Term : 10 years
 Evaluation Term : 24 years
 Annual Average Benefit: 69.701 S/. Million
 Construction Cost: 250.498 S/. Million
 O & M Cost : 1 %

50-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-25	0	0	26	-1		-26
2	-25	7	-0	25		0	-18
3	-25	14	-1	26		0	-11
4	-25	21	-1	26		0	-5
5	-25	28	-1	26		1	2
6	-25	36	-1	26		1	9
7	-25	43	-2	27		1	16
8	-25	50	-2	27		1	23
9	-25	57	-2	27		1	30
10	-25	64	-2	27		1	36
11	0	71	-3	3		1	68
12	0	71	-3	3		1	68
13	0	71	-3	3		1	68
14	0	71	-3	3		1	68
15	0	71	-3	3		1	68
16	0	71	-3	3		1	68
17	0	71	-3	3		1	68
18	0	71	-3	3		1	68
19	0	71	-3	3		1	68
20	0	71	-3	3		1	68
21	0	71	-3	3		1	68
22	0	71	-3	3		1	68
23	0	71	-3	3		1	68
24	0	71	-3	3		1	68
25						1	
26						1	
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-250	1,311	-46	298			1,014

TIRS (EIRR) 27%
 社会的割引率 10%
 VANS (NPV) 196
 B/C 2.172

River Cuenca Nanay

Construction Term : 12 years
 Evaluation Term : 26 years
 Annual Average Benefit: 72.642 S/. Million
 Construction Cost: 272.144 S/. Million
 O & M Cost : 1 %

100-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-23	0	0	23	-1		-23
2	-23	6	-0	23		0	-17
3	-23	12	-0	23		0	-11
4	-23	19	-1	23		0	-5
5	-23	25	-1	24		1	1
6	-23	31	-1	24		1	7
7	-23	37	-1	24		1	13
8	-23	43	-2	24		1	19
9	-23	49	-2	24		1	25
10	-23	56	-2	25		1	31
11	-23	62	-2	25		1	37
12	-23	68	-2	25		1	43
13	0	74	-3	3		1	71
14	0	74	-3	3		1	71
15	0	74	-3	3		1	71
16	0	74	-3	3		1	71
17	0	74	-3	3		1	71
18	0	74	-3	3		1	71
19	0	74	-3	3		1	71
20	0	74	-3	3		1	71
21	0	74	-3	3		1	71
22	0	74	-3	3		1	71
23	0	74	-3	3		1	71
24	0	74	-3	3		1	71
25	0	74	-3	3		1	71
26	0	74	-3	3		1	71
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
33						1	
34						1	
35						1	
36						1	
37						1	
38						1	
39						1	
40						1	
41						1	
42						1	
43						1	
44						1	
45						1	
46						1	
47						1	
48						1	
49						1	
50						1	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-272	1,441	-53	326			1,115

TIRS (EIRR) 26%
 社会的割引率 10%
 VANS (NPV) 190
 B/C 2.126

River Cuenca Urubamba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 6.484 S/. Million
 Construction Cost: 3.024 S/. Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	7	-4		-7
2	0	7	-0	3	-3	1	4
3	0	8	-0	0		2	8
4	0	9	-0	0		3	9
5	0	11	-0	0		4	11
6	0	13	-0	0		6	13
7	0	14	-0	0		7	14
8	0	15	-0	0		8	15
9	0	15	-0	0		9	15
10	0	16	-0	0		10	16
11	0	17	-0	0		11	17
12	0	18	-0	0		11	18
13	0	18	-0	0		11	18
14	0	18	-0	0		11	18
15	0	18	-0	0		11	18
16						11	
17						11	
18						11	
19						11	
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-3	196	-0	10			185

TIRS (EIRR) 99%
 社会的割引率 10%
 VANS (NPV) 76
 B/C 9.417

River Cuenca Urubamba

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 13.849 S/. Million
 Construction Cost: 3.024 S/. Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-3	0	0	7	-4		-7
2	0	14	-0	3	-3	1	11
3	0	16	-0	0		2	15
4	0	17	-0	0		3	17
5	0	18	-0	0		4	18
6	0	20	-0	0		6	20
7	0	21	-0	0		7	21
8	0	22	-0	0		8	22
9	0	23	-0	0		9	23
10	0	24	-0	0		10	24
11	0	25	-0	0		11	25
12	0	25	-0	0		11	25
13	0	25	-0	0		11	25
14	0	25	-0	0		11	25
15	0	25	-0	0		11	25
16						11	
17						11	
18						11	
19						11	
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-3	299	-0	10			289

TIRS (EIRR) 193%
 社会的割引率 10%
 VANS (NPV) 125
 B/C 14.908

River Cuenca Urubamba

Construction Term : 5 years
 Evaluation Term : 19 years
 Annual Average Benefit: 22.434 S/. Million
 Construction Cost: 110.210 S/. Million
 O & M Cost : 1 %

10-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-22	0	0	26	-4		-26
2	-22	5	-0	26	-3	1	-21
3	-22	11	-0	22		2	-12
4	-22	16	-1	23		3	-6
5	-22	22	-1	23		4	-1
6	0	28	-1	1		6	27
7	0	30	-1	1		7	29
8	0	31	-1	1		8	29
9	0	31	-1	1		9	30
10	0	32	-1	1		10	31
11	0	33	-1	1		11	32
12	0	34	-1	1		11	32
13	0	34	-1	1		11	32
14	0	34	-1	1		11	32
15	0	34	-1	1		11	32
16	0	34	-1	1		11	32
17	0	34	-1	1		11	32
18	0	34	-1	1		11	32
19	0	34	-1	1		11	32
20						11	
21						11	
22						11	
23						11	
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-110	508	-18	135			374

TIRS (EIRR) 23%
 社会的割引率 10%
 VANS (NPV) 87
 B/C 1.903

River Cuenca Urubamba

Construction Term : 9 years
 Evaluation Term : 23 years
 Annual Average Benefit: 34.884 S/. Million
 Construction Cost: 180.283 S/. Million
 O & M Cost : 1 %

25-Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-20	0	0	24	-4		-24
2	-20	4	-0	24	-3	1	-19
3	-20	9	-0	20		2	-11
4	-20	15	-1	21		3	-6
5	-20	20	-1	21		4	-1
6	-20	25	-1	21		6	4
7	-20	31	-1	21		7	9
8	-20	35	-1	21		8	14
9	-20	40	-2	22		9	18
10	0	45	-2	2		10	43
11	0	46	-2	2		11	44
12	0	46	-2	2		11	44
13	0	46	-2	2		11	44
14	0	46	-2	2		11	44
15	0	46	-2	2		11	44
16	0	46	-2	2		11	44
17	0	46	-2	2		11	44
18	0	46	-2	2		11	44
19	0	46	-2	2		11	44
20	0	46	-2	2		11	44
21	0	46	-2	2		11	44
22	0	46	-2	2		11	44
23	0	46	-2	2		11	44
24						11	
25						11	
26						11	
27						11	
28						11	
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-180	822	-32	220			602

TIRS (EIRR) 22%
 社会的割引率 10%
 VANS (NPV) 109
 B/C 1.830

River Cuenca Urubamba

Construction Term : 14 years
 Evaluation Term : 28 years
 Annual Average Benefit: 40.801 S/. Million
 Construction Cost: 333.665 S/. Million
 O & M Cost : 1 %

50-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-24	0	0	27	-4		-27
2	-24	3	-0	27	-3	1	-24
3	-24	7	-0	24		2	-17
4	-24	12	-1	25		3	-13
5	-24	16	-1	25		4	-9
6	-24	21	-1	25		6	-4
7	-24	25	-1	25		7	-0
8	-24	29	-2	26		8	3
9	-24	32	-2	26		9	7
10	-24	36	-2	26		10	10
11	-24	40	-2	26		11	14
12	-24	43	-3	26		11	17
13	-24	46	-3	27		11	19
14	-24	49	-3	27		11	22
15	0	52	-3	3		11	49
16	0	52	-3	3		11	49
17	0	52	-3	3		11	49
18	0	52	-3	3		11	49
19	0	52	-3	3		11	49
20	0	52	-3	3		11	49
21	0	52	-3	3		11	49
22	0	52	-3	3		11	49
23	0	52	-3	3		11	49
24	0	52	-3	3		11	49
25	0	52	-3	3		11	49
26	0	52	-3	3		11	49
27	0	52	-3	3		11	49
28	0	52	-3	3		11	49
29						11	
30						11	
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-334	1,086	-68	409			677

TIRS (EIRR) 14%
 社会的割引率 10%
 VANS (NPV) 50
 B/C 1.252

River Cuenca Urubamba

Construction Term : 16 years
 Evaluation Term : 30 years
 Annual Average Benefit: 44.511 S/. Million
 Construction Cost: 446.054 S/. Million
 O & M Cost : 1 %

100-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-28	0	0	31	-4		-31
2	-28	3	-0	32	-3	1	-28
3	-28	7	-1	28		2	-21
4	-28	11	-1	29		3	-17
5	-28	16	-1	29		4	-13
6	-28	20	-1	29		6	-9
7	-28	24	-2	30		7	-6
8	-28	28	-2	30		8	-2
9	-28	31	-2	30		9	1
10	-28	35	-3	30		10	5
11	-28	39	-3	31		11	8
12	-28	42	-3	31		11	11
13	-28	44	-3	31		11	13
14	-28	47	-4	32		11	16
15	-28	50	-4	32		11	18
16	-28	53	-4	32		11	21
17	0	56	-4	4		11	51
18	0	56	-4	4		11	51
19	0	56	-4	4		11	51
20	0	56	-4	4		11	51
21	0	56	-4	4		11	51
22	0	56	-4	4		11	51
23	0	56	-4	4		11	51
24	0	56	-4	4		11	51
25	0	56	-4	4		11	51
26	0	56	-4	4		11	51
27	0	56	-4	4		11	51
28	0	56	-4	4		11	51
29	0	56	-4	4		11	51
30	0	56	-4	4		11	51
31						11	
32						11	
33						11	
34						11	
35						11	
36						11	
37						11	
38						11	
39						11	
40						11	
41						11	
42						11	
43						11	
44						11	
45						11	
46						11	
47						11	
48						11	
49						11	
50						11	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-446	1,229	-96	549			680

TIRS (EIRR) 11%
 社会的割引率 10%
 VANS (NPV) 10
 B/C 1.042

River Ramis, Puraca and Azangaro

Construction Term : 1 years
 Evaluation Term : 15 years
 Annual Average Benefit: 3.358 S./ Million
 Construction Cost: 19.471 S./ Million
 O & M Cost : 1 %

2-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-19	0	0	23	-3		-23
2	0	4	-0	0		1	4
3	0	4	-0	0		1	4
4	0	5	-0	0		2	5
5	0	6	-0	0		2	6
6	0	7	-0	0		3	6
7	0	7	-0	0		4	7
8	0	7	-0	0		4	7
9	0	8	-0	0		5	8
10	0	8	-0	0		5	8
11	0	9	-0	0		5	9
12	0	9	-0	0		5	9
13	0	9	-0	0		5	9
14	0	9	-0	0		5	9
15	0	9	-0	0		5	9
16						5	
17						5	
18						5	
19						5	
20						5	
21						5	
22						5	
23						5	
24						5	
25						5	
26						5	
27						5	
28						5	
29						5	
30						5	
31						5	
32						5	
33						5	
34						5	
35						5	
36						5	
37						5	
38						5	
39						5	
40						5	
41						5	
42						5	
43						5	
44						5	
45						5	
46						5	
47						5	
48						5	
49						5	
50						5	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-19	100	-3	26			75

TIRS (EIRR) 24%
 社会的割引率 10%
 VANS (NPV) 22
 B/C 1.989

River Ramis, Puraca and Azangaro

Construction Term : 3 years
 Evaluation Term : 17 years
 Annual Average Benefit: 10.007 S./ Million
 Construction Cost: 75.859 S./ Million
 O & M Cost : 1 %

5-Year Year	Construction Cost (S./ Million)	Benefit (S./ Million)	O & M Cost (S./ Million)	Total Cost (S./ Million)	P/C Cost	P/C Benefit	Total (S./ Million)
1	-25	0	0	29	-3		-29
2	-25	4	-0	26		1	-22
3	-25	8	-1	26		1	-18
4	0	12	-1	1		2	11
5	0	13	-1	1		2	12
6	0	13	-1	1		3	13
7	0	14	-1	1		4	13
8	0	14	-1	1		4	13
9	0	15	-1	1		5	14
10	0	15	-1	1		5	14
11	0	15	-1	1		5	15
12	0	15	-1	1		5	15
13	0	15	-1	1		5	15
14	0	15	-1	1		5	15
15	0	15	-1	1		5	15
16	0	15	-1	1		5	15
17	0	15	-1	1		5	15
18						5	
19						5	
20						5	
21						5	
22						5	
23						5	
24						5	
25						5	
26						5	
27						5	
28						5	
29						5	
30						5	
31						5	
32						5	
33						5	
34						5	
35						5	
36						5	
37						5	
38						5	
39						5	
40						5	
41						5	
42						5	
43						5	
44						5	
45						5	
46						5	
47						5	
48						5	
49						5	
50						5	
51						0	
52						0	
53						0	
54						0	
55						0	
56						0	
57						0	
58						0	
59						0	
60						0	
61						0	
62						0	
63						0	
64						0	
65						0	
66						0	
67						0	
68						0	
69						0	
100	-76	214	-11	91			124

TIRS (EIRR) 14%
 社会的割引率 10%
 VANS (NPV) 16
 B/C 1.227

River Ramis, Puraca and Azangaro

Construction Term : 18 years
Evaluation Term : 32 years
Annual Average Benefit: 13.542 S/. Million
Construction Cost: 488.534 S/. Million
O & M Cost : 1 %

10-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-27	0	0	30	-3		-30
2	-27	1	-0	27		1	-26
3	-27	3	-1	28		1	-25
4	-27	4	-1	28		2	-24
5	-27	6	-1	28		2	-23
6	-27	7	-1	28		3	-21
7	-27	8	-2	29		4	-21
8	-27	9	-2	29		4	-20
9	-27	11	-2	29		5	-19
10	-27	12	-2	30		5	-18
11	-27	13	-3	30		5	-17
12	-27	14	-3	30		5	-16
13	-27	14	-3	30		5	-16
14	-27	15	-4	31		5	-16
15	-27	16	-4	31		5	-15
16	-27	17	-4	31		5	-15
17	-27	17	-4	31		5	-14
18	-27	18	-5	32		5	-14
19	0	19	-5	5		5	14
20	0	19	-5	5		5	14
21	0	19	-5	5		5	14
22	0	19	-5	5		5	14
23	0	19	-5	5		5	14
24	0	19	-5	5		5	14
25	0	19	-5	5		5	14
26	0	19	-5	5		5	14
27	0	19	-5	5		5	14
28	0	19	-5	5		5	14
29	0	19	-5	5		5	14
30	0	19	-5	5		5	14
31	0	19	-5	5		5	14
32	0	19	-5	5		5	14
33	0	19	-5	5		5	14
34							
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66							
67							
68							
69							
100	-489	449	-110	602			-153

TIRS (EIRR) -3%
社会的割引率 10%
VANS (NPV) -159
B/C 0.354

River Ramis, Puraca and Azangaro

Construction Term : 19 years
Evaluation Term : 33 years
Annual Average Benefit: 15.922 S/. Million
Construction Cost: 514.142 S/. Million
O & M Cost : 1 %

25-Year Year	Construction Cost (S/. Million)	Benefit (S/. Million)	O & M Cost (S/. Million)	Total Cost (S/. Million)	P/C Cost	P/C Benefit	Total (S/. Million)
1	-27	0	0	30	-3		-30
2	-27	1	-0	27		1	-26
3	-27	3	-1	28		1	-25
4	-27	4	-1	28		2	-24
5	-27	6	-1	28		2	-22
6	-27	8	-1	28		3	-21
7	-27	9	-2	29		4	-20
8	-27	10	-2	29		4	-19
9	-27	11	-2	29		5	-18
10	-27	12	-2	29		5	-17
11	-27	14	-3	30		5	-16
12	-27	15	-3	30		5	-15
13	-27	15	-3	30		5	-15
14	-27	16	-4	31		5	-14
15	-27	17	-4	31		5	-14
16	-27	18	-4	31		5	-13
17	-27	19	-4	31		5	-13
18	-27	20	-5	32		5	-12
19	-27	20	-5	32		5	-11
20	0	21	-5	5		5	16
21	0	21	-5	5		5	16
22	0	21	-5	5		5	16
23	0	21	-5	5		5	16
24	0	21	-5	5		5	16
25	0	21	-5	5		5	16
26	0	21	-5	5		5	16
27	0	21	-5	5		5	16
28	0	21	-5	5		5	16
29	0	21	-5	5		5	16
30	0	21	-5	5		5	16
31	0	21	-5	5		5	16
32	0	21	-5	5		5	16
33	0	21	-5	5		5	16
34							
35							
36							
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66							
67							
68							
69							
100	-514	516	-118	636			-120

TIRS (EIRR) -2%
社会的割引率 10%
VANS (NPV) -155
B/C 0.381

