TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

					. !							
¥ork Description/Item		Fin. F. C.	2004 X X Fin.L.C. Eco.L.C.	Million RIS Fin. Total	Fin.F.C. Eco.F.C.	2005 x Mil Fin.L.C. F Eco.L.C. E	Million Rls Fin.Total Eco.Total	Fin. F.C.	2006 X Million Rls Fin.L.C. Fin.Total Eco.L.C. Eco.Total	Fin. F. C.	Total x Million Fin.L.C. Fin Eco.L.C. Eco	ion Rls Fin. Total Ecc. Total
E. Amol West District(I) I. Construction Cost I.I. Storage Dan	or .	0	0	0 10	0	0	•			0	0	6
1.2. Diversion Dam		0	0	6	0	0	0	٠		80	120	200
1.3. Main Canal/Drain							•		<i>:</i>	627	107	167
1.4. Secondary Canal	15					·				514	567	1,287
1.5. Tertiary Canal	11	118		267 267						514 787	433 994	1,781
1.6. Land Consolidation	벍	1.757			1,171	486	1.657			11,713	733	15,520
1.7. River Training	15				+ 400 C	0 47 t	- 15 - 15 - 1			354	53	15, 467
1.8. 0/N Road	IS				212	~ ~ (	255			354 213	# # # # # # # # # # # # # # # # # # #	427
1.9. Miscellaneous	135	2.0			70 0	V 0 4	300	÷		213	20 0	233
- AW- I Sub-Total (1) -		2.037 2.037	974 974 902		1,228	492	1,720	00	00	14,288	7,427	21,715 21,058
2. Procurement of Equipment										2,388	232	2,620
3. Survey & Investigation										2,388 2,80 3,80 3,80 3,80 3,80 3,80 3,80 3,80 3	186 552	2,574
4. D.D.and Supervision	т	. 88	113	188				:		1,720	2.260	702 3,960
5. Building/Motor Pool		8	TR.	7.7						1,720	1.814	3,534
6. Land Acquisition and Compensation 7. D & M Equipment	90	ě	53	228 50	203		226			400 000 000 000 000 000 000 000 000 000	1,395	1.396 1.396 1.116
8. Administration (% of 1.)	n) %4	102	6.5	151	207	52 52 53	86	0.6		710	374	1.090
9. Physical Contigency (% of 1.)	** 01	102 204 204	9 63	264 264	123	4 0 0 4 0 0	271 172 172	200	900	715 1,429 1,429	338 745 678	2,174
- AW- I .Total (1~-9) -		2.632	1,256	3.888	1,615	589 576	2,204	00	00	21,235	13,074	34,309
10. Price Contingency F.C. 4.8 L.C. 15.5	54.95 Cn Co	4.620	7,079	11.699	2.971	3,834	6,305		000	32,872	47,738	80.610 75.215
Jotal		7,252	8,335	15,587	4.586	4,423	9,009	00	0 0	54, 107	60.812	114.919
	-			1.777774844			***********					

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

	111111111111111111111111111111111111111						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Work Description/Item	на по по Бо Во Во Во Во Во Во Во Во Во Во Во Во Во	Total x Mil. Fin.l.C. Ecc.L.C.	Million RIS C. Fin. Total C. Eco. Total	Eco. F. C.	1993 X X Fin.L.C. Eco.L.C.	Million Rls . Fin.Total . Eco.Total	Fin.F.C.	1994 x Mi Fin.L.C. Ecc.L.C.	1994 x Million Rls Fin.L.C. Fin:Total Eco.L.C. Eco.Total %	Fin. F. C.	1995 × Mi Fin.L.C. Ecs.L.C.	Million Rls Fin.Total Eco.Fotal
1. Construction Cast	c	•		٠								
Tr. Slorage nam	<b>.</b>	90		.*								
1.2. Diversion Dam	174	261										
1.3. Main Canal/Drain	1,226	1,739						,				
	3,226	1,400			-							
1.4. Secondary Cenar	2.081	2,573										
1.5. Tertiary Canal	1,837	2.097		-								
1.6. Land Consolidation	13,501	3,946	17,447		-							
guinter Transfer 7	13,501	3,955										
01411111 10211	775	161										
1.8. 0/# Road	521	27										
1.9. Miscellaneous	10	r. O										
1 VIV 10000 0000 0000	0 01	73.0				c	c		c	C	=	
יוי במיסיומים וו ראא -	18,815	9,920	28,835	•	0 0	•		0	, 0	.0	· 0	
2. Procurement of Equipment	5.458		5.984									
3. Survey & Investigation	432		1,350						50	216	459 367	573
4. D.D.and Supervision	3,936		9, 107							1	;	3
ריים של איני אל היים את היים א היים של היים את היים א	3, 935 64		8,073			20		6	32 50	32	48	æ
	59		F				13	12	28	32	8	71
6. Land Acquisition	0 6		2,325									
7. O & M Equipment	675		750									
8. Administration (% of 1.) 5 %		572	1,568	5,		00	00	00	00	90	00	0.0
9. Physical Contigency 10 % (% of 1.)	1,992	496 1,143 992	1,492 3,135 2,984			o 🙃 O	900	<b>,,</b> ,	000			
- AW-11 -Tatal (1~9) -	33,486	22, 260	55,726		00	00	13	13	332	248	507 405	755 654
10. Price Contingency	52.279	83, 305	135,584			0	14	52	88	285	781	1,06
F.C. 4.8 %	52,279	70,882	123, 161			0	14	20	4.	ç8,	979	6
total	85,745	105,565	191,310		0	00	27	35	77.	533 533	1,288	1.821
			1 1 1 1 1 1 1 1 1 1								111111111	

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	1				1	1	1	1	1	1				
Work Description/Item	. 62	Fin. 6.	1995 X M1: Fin.L.C. E	Million Rls Fin Total Ecc. Total	Fin. F. C.	1997 x Mi Fin.L.C Ecc.L.C.	Million Rls Fin.Total Eco.Total %	Fin. F.C.	1998 x Million Ris Fin.L.C. Fin.Total Eco.L.C. Eco.Total	Million Ris . Fin.Total . Eco.Total %	Fin. F. C.	1999 X MS Fan L. C. Eco. L. C.	x Million RIS L.C. Fin.Total L.C. Eco.Total	
F. Amel West District(11) 1. Construction Cost 1.1. Storage Dam		·	 	C			10			0 10		0	0	
1.2. Diversion Dam	30	52	78	130 40		104	174 30		° 20 ¦	130	Б	0		
1.3. Main Canal/Drain		25	7.1	123 10	123	174	164 297 15	184	71 261	123	184	261	445	
1.4. Secondary Canal					153	140	263 10	184 208	210	394 533 10	184	325	394 533	
1.5. Tertiary Canal							01	208 164	257 210	374 10	208	257	465 374	
I.S. Land Consolidation								164	154	318	164 1,350	154 395	318	
1.7. River Training							٠			10	1.350	397	1,747	
1.8. 0/M Road										. 10	78	91 8	S &	
1.9. Miscellaneous										10	252	400	ខ្លួក	
- AW-II Sub-Total (1) -		52.2	78	130	193 193	278 234	471	608 608	874 692	1.482 I.300	2,036	1,205	3,241	
2. Produrement of Equipment							20	2.728	264	2,992 50	2,728	797	2,932	
3. Survey & Investigation	50	216	459	675 583				071.7	717	6.26.7	07) '7	777	6.8.7	
4. D.D.and Supervision				iei	197	259	456 10	394	517	911 15 808	590	776	1.368	
5. Building/Motor Pool 6. Land Acquistition and Compensation 7. 0 & M Equippent	e e	9 B	23	48 42 50	00	1.163	1.163 50	00	1,153	1.153		; ; ;		
8. Administration (% of 1.) 5 9. Physical Contigency 10 (% of 1.)	34 BE	നനന	4400	7 - 21	10 10 19	11. 12. 23. 23. 23.	22 47 47 47	8 61 13	4 8 8 8 4 8 8 8	74 55 130	102 102 204 204	60 52 121 104	162 154 325 308	
- AM-II Total (1~9) - 10. Price Contingency R.C. 4.8 1.C. 15.5	22.02	295 295 356 356	578 472 1.029 840	873 767 1,385 1,196	419 419 530 530	1,742 1,406 3,581 2,890	2.161 1,825 4.111 3,420	3.821 3.821 5.082 5,062	2,949 2,351 7,001 5,581	6,770 6,172 12,063 10,643	5,650 7,859 7,859	2,426 2,026 6,552 5,555	8.086 7,686 14.511 13.414	
Total		651 651	1,607	2,258	948 948	5,323 4,296	6.272 5.245	8,883	9.950	18,833	13.519	9.078	22,597	
	!			1										

TABLE E. 2.2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Destription/Item	Fin.F.C.		2000 x Million Ris Fin. L.C. Fin. Total Eco. L.C. Eco. Total	llion Ris in.Total	Fin. F. C. Eco. F. C.	2001 x Million Rls Fin.L.C. Fin.Total Eco.L.C. Fco.Total	llion Rls Fin. Total For. Total %	Fin. F. C. Bco. F. C.	2002 X Mil Fin.L.C. F	Million Ris Fin. Total	## ## C.	2003 X Mi Fin.L.C. Eco.L.C.	2003 x Million Ris Fin.L.C. Fin.Total Eco.L.C. Eco.Total
F. Amol West District(II) 1. Construction Cost 1.1. Storage Dam		00	9.6	0 15	0 0	96	0 15	Φ <b>c</b>	Ω.c	0 15		<b>Θ</b> 0	0-
1.2. Diversion Dam		>			>			>	>	<b>.</b>			•
1.3. Main Canal/Ozain	15	184	251	445 15	184	182	445 15	184	261	445 15	-	261	445
1.4. Secondary Canal	15	315	487	799 15	312	784 787	799 15	312	487	799 15		487	799
1.5. Tertiary Canal	15	246	315	561 15	246	315	561 15	246	315	561 15	315 245 245	8 E 6	561
1.6. Land Consolidation	1001	320	388	1,745 15	2,025	202	2,617 15	2,025	583 202	2,617 15	2 025	592	2,517
1.7. River Training	01	56.5	ğ II i	89 15	116	0 t- 0	133 15	116	17	133 15		110	133
1.5. 0/M Road	10	8 22 S	ရှက •	4.00.0 4.00.1 3.13.13.13.13.13.13.13.13.13.13.13.13.13	128	441	140 82 15	75	यु च र	140 82 15		ुच द	182 82 83
1.9. Miscellaneous	01	, o	<b>.</b> .	80 °	ğΘ.	~ © €	0 15	0.00	~ 0 (	0 12 0 12	004	~ © (	္မွ
- AW-II Sub-Total (1) -	2.2	222	1.472	3.694	2,961	1,675	4,637	2.981	1,676	4,637	2,951	1,678	4.537
2. Produrement of Equipment		}		<u> </u>		ì							٠
								•					
d. Survey & Investigation													
4. D.D.and Supervision	15	590	776	1,366 15	390	776	1,366 15	590	776	1,366 10	394	517	911
5. Building/Notor Pool	Ď.	5	170	177	, ,	178	1,21,	9	7 70	1171	<b>ዞ</b> በ 7	Ş	3
<ol> <li>Land Acquisition and Compensation</li> <li>0 &amp; M Equipment</li> </ol>		٠											
8. Administration (% of I.) 5 %	A	П:	4.2	185	14.0	984	232	148	28.	232	148	36	232
<ol> <li>Physical Contigency 10 % (% of 1.)</li> </ol>	1818	222 222	92 147 124	346	298 298 298	145	177 198 198	296 296 296	165	464	236 236 236 236 236	168 145	464 461 461
- AW-II · Total (1~9) -	e e	55	2.469	5,614	3.985	2.704	6,899	3.995	2.704	8,599 287	3,795	2,445	5,244 5,827
10. Price Contingency F.C. 4.8 %	4.578 4.578 4.578	355	7,818	12.395 11.072	5,392 6,092 6,092	2 89 89 89 89 89 89 89 89 89 89 89 89 89	15,983	6.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	11.424 9,584 9,584	17,809 16,069	6.053 0.053 0.053	11,931 10,174	18,294
Total	7,721	ដ្ឋ	10,288	16.268	10,087	12,595	22.682	10.380	14,128 11,976	24.508 22,356	10,152	14,376	24,538
		-			, , , , , , , , , , , , , , , , , , , ,					1 1 1 1 1 1 1			

TABLE E. 2.2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Description/Item	## ## ## ## ## ##	2004 × Ni Fin. L. C. Eco. L. C.	Million RIS Fin. Total	Fin.F.C.	2005 × Mil Fin.L.C. F	Million Ris Fin. Total	Fin. 6.	2006 X Mil Fin.L.C. E	Million Ris Fin fotal	Fin.F.C. Eco.F.C.	Total X Mill Fin.L.C. Ecc.L.C.	Million Ris C. Fin.Total C. Eco.Total
F. Amol West District(II)								1 1 1 1 1 1 1		i ·		
<ol> <li>Construction Cost</li> <li>Storage Dam</li> </ol>	0 01	00	0 10	00	φ¢	00				00	00	00
1.2. Diversion Dam	>	•	>	•	,	•				174	260	484
1.3. Main Canal/Drain						•				1,227	1,740	2,967
1.4. Secondary Canal	10 208		533 10	208	325	533				2.080	3,248	5,328
1.5. Tertiary Canal	10 164	257	955 374 10	154	210	376 476				1.540	2,100	3,740
1.5. Land Consolidation	15 2.025		2,617 10	1.350	1000	1,745 10	1,350	395	1.745	13,500	9000	17,448
1.7. River Training	15 2116		133 10	7.0	in the	89 10	0 0 0	511	88	776	112	888
1.8. 0/N Road	115 778		82 10	22	3 m <	55 10	. e. i.	900	. 22 A	520	78 78 78 78	548
1.9. Miscellaneous	15 0	~ 0 4	8 0 c	300	, c	ន (	, o e	*00	00	900	.00	, a c
- AW-II Sub-Total (1) -	2,591 2,591	1.148 1.037	3,739	1,852	944 828	2,796	1.480	409	1,889	19,917	11.438	31,353
2. Procurement of Equipment				:						5. 45. 6. 65. 6. 65.	528	5,984
3. Survey & Investigation	. •	4								432	918	1.350
4. 3.D. and Supervision	10. 394	517	911 5	191	259	456		. :		3 63 6	5 173	9,109
5. Building/Notor Paol	# 50 7	7	000	181	3				٠	48	96	150
6. Land Acquisition and Compensation 7. 0 & M Equipment			90	80 6 60 6	88.6	376.50	338	88 6	376 9.00	0 0 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	2,326 1,860 76	2,325 1,850 752
8. Administration (% of 1.) 5%	130	57	187	9 ED C	24.4	140	47.	325	328	997	572 498	1,569
9. Physical Contigency 10 % (% of 1.)	259 259 259	115	374 363	185 185	88	279 268	148	41 41	189	1,991	1,145	3,135
- AW-II.Total (1~9) -	3.374		5,211	2,665	1,382	4,047	2,040	508 510	2.548	33,469	22,270	55,739
10. Price Contingency F.C. 4.8 % L.C. 15.5 %	5,922	10.354	16.275 14.979	4,902	7,740	13,899	3,933	3,820	7,753	52, 279 52, 279	83.305 70,882	135,584
10101	9,296	12,191	21,487	7,567	10,379 8,929	17,946	5.973 5.973	4,328	10,301	85,748	105,575	191,323

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

	1										
Work Description/Item	Fin.F.C.	Total x Mill Fin.L.C. Ecc.L.C.	Total X Million Rls Fin.L.C. Fin.Total Eco.L.C. Eco.Total	ECO.F.C.	1993 x William Ris Fin. L.C. Fin. Total Eco. L.C. Eco. Total	21s tal Fin F.C. tal % Eco.F.C.	1994 X X Fin.L.C. Eco.L.C.	4 Xillion RIS .C. Fin.Total X .C. Eco.Total X	Fin. F. C. Eco. F. C.	1995 Finilic F Ecollic E	Million Ris Fin.Total Eco.Total
G. Amol East District(I) I. Construction Cost				P 1 1 1 1 1 1					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
I-1. Storage Dam	-0	00	00								
1.2. Diversion Dam	85 8	129	215					,			
1.3. Main Canal/Drain	794	845	1,639								
Fereydon Kenal Drain	299	122	421								
1.4. Secondary Canal	1,265	1,413	404 2.678								
1.5. Tertiary Canal	331	578 578	506		-						
1.6. Land Consolidation	10,365	93.4	15.299		:	•					
1.7. River Training	148	# . 632 # . 632	208								
1.8. U/H Road	257	251	270								
1.9. Miscellaneous	) o t	70	6/Z								
- AE- I Sub-Total (1) -	13,549	8 036 7 081	21.639 20,624	90		000	90	00		00	90
2. Procurement of Equipment	2.726	284	2,992						-		
3. Survey & Investigation	230	490	720					50	115	245	360
4. D.D.and Supervision	1,968	2.586 2.586	4,554						CTT .	130	116
5. Building/Koter Pool	325	48	, 50 08 08 08			20 6	01	18 50	16	24	ф. С
6. Land Acquisition	4 O 6	1,240	1.240				a	<del>,</del>	9	2	g
7. 0 & M Equipment	360	7 6 6 4 0 6	400 400								
8. Administration (% of 1.) 5 %	677	20 405	1,082	00	Φ.		00	00	00	00	00
9. Physical Contigency 10 % (% of 1.)	1,354	810 708	2,164	200	200	200	> 50	500		> 500	<b>∍</b> ©a
- AE- I ·Total (1~9) -	20.892	13.979	34,871	<b>0</b> 0	90		10	16	131	269	400
<pre>10. Price Contingency F.C. 4.8 % L.C. 15.5 %</pre>	32,242	51.882	83.924 76.579	.00	. 00	0 0 7 7		20 18	151	331	565 482
Total	53, 234	65,651	116, 795	0.5	0	13	23	36.	262	683	965
	FOT YOU	177,50	103,040	>   	,			i	121	7 P 1	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

													.
Work Description/Item	#4 # 00 # 00	ت ن ن ن ن	1996 x Xillion Fin.L.C. Fin.To Eco.L.C. Eco.To	ion Ris n.Total o.Total %	Fin. F. C.	1997 × Mill Fin.L.C. F	Million RIS Fin. Total Eco. Total	Fin. F. C.	1998 × Ki Fin.L.C. Eco.L.C.	llion Rls Fin. Total Ecc. Total	Fin. F.C.	1999. x M3 Fin L.C. Ecc.L.C.	Million RIS 1. Fin.Total 1. Eco.Total
<ul><li>G. Amol East District(I)</li><li>1. Construction Cost</li><li>1.1. Storage Dam</li></ul>							. 10	0.0	0.0		0	0.	01
1.2. Diversion Dam	30	56 26	SS 45	65 40	35	22		. 65 K	ာ စွာ ငွ	. <b>6</b>			<b>5</b>
1.3. Main Canal/Drain		3	3	10	7 ch 1	. W. C	164 15	119	127		119	127	245
Fereydon Kenal Drain					2	2	n F	611	#0 1		2 -		
1.4. Secondary Canal							10	127	141	258 15			402
1.5. Tertiary Canal							10	33	388	91 15		u. 	137
1.6. Land Consolidation									7 5	15			2.295
1.7. River Training										. 15	<b>-</b> i		2 2 2 2 3 3 3 3 3 3
I.S. O/M Ruad							4			. 15			S 4.
1.9. Miscellaneous							* ,			15		200	0 0
- AE-I Sub-Total (1) -		52 28	8.8	83.18	113	137	250 229	305 305	365 284	670 589	1,975	ਜੱਜੋ	3, 152 3, 004
2. Procurement of Equipment				•			50	1.364	132	1,496 50	1.364	132	1,496
3. Survey & Investigation	50	115	245	360				605 T	90-1	0.5.1	tor : †		7.4.0
4. D.D. and Supervision		<u> </u>	967	3	88	129	227 15	295	88 6	683 15	295	388	883
5. Building/Matar Pool	30	25	77.5	24	9	3	7.7	26.7	2	3			3
6. Land Acquisition and Compensation 7. 0 & M Equipment	-	•	•	90	00	520 496	520 50 496	00	620 496	620 496			
8. Administration (% of 1.) 5 %		<i>.</i> -	~ c	es e	to u	۳. ۵	- E :	ស្ត	31 %	88	88	න ස ග	158
9. Physical Contigency 10.2 (% of 1.)		100	प्यंच .	,	²55	14	23:21:2	188	37	7 B S	198 198	118	316
- AE-I · Total (1~9) -		55	304	459	228	507	1.135	2.010	1.550	3.570	3,931		5,805
<ol> <li>Price Contingency F.C. 4.8 %</li> <li>L.C. 15.5 %</li> </ol>	leded	187	541 441	728	798 798 798 798	1.864	2,152 1,795	2.663	3,704	5,867	5,458	4,385	10,597 9,843
Total		342 342	845 689	1,187	516	2,771	3,287	4,673	5.264	9.937	9,389	7,013	16,402
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Description/Item	**************************************	2000 , x Mi Fin.L.C. Ecc.L.C.	Million RIS Fin. Total Eco. Total	6*	Fin. 6.0.	2001 x Mi Fin.L.C. Ecc.L.C.	Million Ris Fin. Total Eco. Total %	Fin. F. C.	2002 x Million Rls Fin. L.C. Fin. Total Eco. L.C. Eco. Total	Million Rls Fin.Total	Fin.F.C.	2003 X Killion Ris Fin.L.C. Fin.Total Eco.L.C. Eco.Total	Willion Ris Fin. Total Eco. Total
6. Amol East District(1) 1. Construction Cost 1.1. Storage Dan 1.2. Diversion Dam	15	00	00	15		00	0 15 0	00	00	0 15	90	0	<b>&amp;</b> O
1.3. Main Canal/Drain Fereydon Kenal Drain	15 119	9 127 9 104	7 245	15	119	127	246 15 223	119	127	246 15 223 50	119	127 104 61	245 223 211 211
1.4. Secondary Canal 1.5. Pertiary Canal	15 19 51 15 15 15 15 15 15 15 15 15 15 15 15	212 155 00 155 87	2 402 5 345 7 137	15	190 190 50	212 155 87	402 15 345 137 15		212 155 87	402 15 345 137 15	950	1512 87.55 8	3452
1.6. Land Consolidation 1.7. River Training	15 1,555 15 1,555 15 22	•	22	112 123	1,555 1,555 22	740 740 969 9	2,295 15 2,251 31 15	1,555	694 986 986	2,295 15 2,251 31 15	1.555 2.555 2.255	740 740 89 89 89	2,295 2,251 31
1.8. O/N Road 1.9. Miscellaneous	. 21 . 31 . 35 . 35		0 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	15	1660	3000	41 15 42 6 15		2 N M O	41 15 42 0 15	188	) N 10 0 1	3 th 62 to 6
- AE-I Sub-Tatal (1) -	1.975 1.975	0. 0 5 1,177 5 1,029	0 7 3,152 9 3,004		0 1,975 1,975	1,177	3; 152 3, 004	1.975	1,177 1,029	3,152 3,004	2,125 2,125	1,238 1,082	3,383
2. Procurement of Equipment													
3. Survey & Investigation													
<ol> <li>D. D. and Supervision</li> <li>Building/Kotor Pool</li> </ol>	15 295 295	388	. 683 . 605	<b>5</b>	295 295	368 310	683 15 605	295 295	388	683 15 605	295 295	388 310	683 605
<ul> <li>Land Acquisition and Compensation</li> <li>0 &amp; M Equipment</li> </ul>													
8. Administration (% of 1.) 5 % 9. Physical Contigency 10 % (% of 1.)	99 99 198 198	59 51 118 1103	158 150 150 316		99 1999 1999	59 51 103	158 150 316 301	88 T T T 88 8 B T 8 B B B B B B B B B B	55 51 118 103	158 150 316 301	106 106 213	62 54 124 108	168 160 337 321
- AE-J ·Total (1~5) - 10. Price Contingency F.C. 4.8 % L.C. 15.5 £	2.567 2.567 3.735 3,735	1,742 1,493 5,517 4,728	4,309 3,453 3,453		2,567 2,567 3,915 3,915	1,493 8,372 5,461	4.309 4.060 10.267 9,376	2,567 2,567 4,102 4,102	1,493 7,360 6,308	4,309 4,060 11,462 10,410	2,739 2,739 4,587 4,587	1.554 1.554 8.842 7.583	4,253 4,293 13,429 12,170
Total	6, 302 6, 302	7,259 6,221	13,561		6,482	6,954	13,436	6,669	9,102	15,771	7.326	10.654	17,980

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Contribution   Cont									-					-	-
10   0   0   0   0   0   0   0   0   0	Work Description/Item	-	:	X	llion Rls Fin.fotal Eco.fotal	36	į	2005 × Mil Fin.L.C. F	llion Ris in.Total	2. E	! .	fillion Rls Fin. Total Eco. Total	Fin. F. C. Eco. F. C.	Total X Mil Fin.L.C. Eco.L.C.	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
1.2. Diversion has been consistent but the characteristic from the characteristic form that characteristic form to consistent but the characteristic form to consistent form t	. Amal East District(I) I. Construction Cost I. Storage Dam	01	0	0	1	] 	0	0	0	1	1 1 1 1 1 1 1 1 1 1 1		0	•	
Feergoon Kanal Drain   50   150   51   201   2	1.2. Diversion Dam		0	0	0		C	0	ο,				98	130	
Fereydon Knall Drain   50   150   51   211   211   212   2	1.3. Main Canal/Drain												793	116 847	
1.6. Land Convolute Canal 15 199 222 429  1.6. Land Convolute Canal 15 199 222 429  1.7. Rever Training 15 129 222 429  1.8. Land Convolute Canal 15 199 222 429  1.9. Miscellaneous 15 199 222 429  1.0. Miscellaneous 15 199 222 429  1.0. Miscellaneous 15 199 222 429  1.0. Miscellaneous 15 199 199 220  1.0. Miscellaneous 15 199 199 199 199 199 199 199 199 199	Fereydon Kenal Drain		150	16	211							٠	300	122	
1.5. Teartery Canal   15   190   150   140   150   140   150   140   150   140   150   140   150   140   150   140   150   140   150   140   150   1	1.4. Secondary Canal	ŭ	150	212	203 402		•			-			1,267	106	٠
1.6. Land Consolidation 15 1.555 555 2.251 1.637 493 1.530 1.530 1.537 4.533 4.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.533 1.530 1.537 4.531 1.537 4.531 1.537 4.531 1.537 4.531 1	1.5. Tertiary Canal	15	3 S S	30	137								1,257	580	
1.7. Flyer Training   15	I. S. Land Consolidation	15 1,	535	740	2,295	10	1,037	493	1.530				10,357	420	
1.8. Miscellaments 15 52 6 10 12 7 26 7 26 7 26 7 26 7 26 7 26 7 26 7	1.7. River Training	15	ខ្លួន	9 CF (		10	1,037	2. 2.	1,501				10,357	050	
## Miscellandus   15   0	1.8. 0/W Road		388	יי אים	9.5	91	28 28 28	ഗ ⊢ ഗ	27.0				147 260		
## Figure 1 (1) - 2.006	1.9. Miscellaneous		300	900	70	. 01	9 0 1	70	000				7PD 6	30	
Trocurement of Equipment   2,728   254   254   255   254   255	- AE- I Sub-Total (1) -	22.2	900	1,111 976	3,117		1,078 1,078	500 471	1,578	50		9 0	13,553	8,088 7,082	21,651 20,635
## Supervision 5 98 129 227 230 430 430													2,728	264	
1. D. and Supervision   5 98   129   227   1.966   2.506   2													230	490	
And Acquisition Foci and Acquisition Foci and Acquisition Foci and Acquisition Foci and Acquisition and Acquis		ю.	88 8	129	227				٠. ,				1,966	2,535	
Addinistion  & M Equipment  and Acquisition  & M Equipment  and Compensation  & M Equipment  and Compensation  & M Equipment	5. Building/Motor Pool		3		102								32	48 48	
## Heutpment 50 180 20 200 50 180 20 200 40 40 40 40 40 40 40 40 40 40 40 40 4							• •		<i>x</i>				d o o	1,240	
dministration (% of 1.) 5 % 100 56 155 54 25 79 0 0 0 678 405 333 405 100 100 100 100 100 100 100 100 100 1			180 180	2 4		9	081 180	20 15	200 156				380	32	
hysical Contigency 10 % 201 111 312 108 50 158 0 0 0 1.359 812  AE-1 Total (1-9) - 2.565 1,427 4,012 1,420 585 2.015 0 0 0 20,906 11.875 3 1.645 1.650 1 0 0 0 20,906 11.875 3 1.645 1.650 1 0 0 0 0 22,242 44,337 1.615 1 1.615 2 1.6	Administration (% of 1.)		001	56	995		50.0	25	7.6	00	00	00	673	405	
AE-1.Total (1~9) - 2.585 1.427 4.012 1.420 585 2.015 0 0 0 20.906 13.984 2.585 1.244 3.829 1.420 558 1.978 0 0 0 20.906 11.876 11.876 0 0 0 20.906 11.876 11.876 0 0 0 20.906 11.876 2.515 2.012 2.524 4.337 2.52 4.537 7.011 11.548 2.512 3.592 5.244 0 0 0 0 32.242 44.337 44.337 2.132 9.470 15.592 4.139 8.500 0 0 53.148 65.656 5.213			201	111	312		108	50 47	158			900	1,359	312 709	
rice Contingency F.C. 4.6 % 4.537 8.043 12,580 2,612 3,873 6,485 0 0 0 32,242 51,682 51,682 2 6,244 0 0 0 32,242 51,682 44,337 1.0.1 11,548 2,612 3,632 6,244 0 0 0 32,242 44,337 1.0.15.5 %	- AE- ] ·Total (1~9) -	2.5	585	1,427	4.012		1,420	595 558	2,015	00	00	00	20,908	13.984	34,890
Total         7.122         9.470         16.582         4.032         4.486         8.500         0         0         0         53.148         65.666           7.122         9.255         15.377         4.032         4.199         8.222         0         0         0         53,148         55.213	10. Price Contingency F.C. 4.6 % L.C. 15.5 %		537	8.043	12,580		2,612	3, 673	5, 485 5, 244	00	<b>0</b> 0	00	32,242	51,682	83,924 75.579
			122 122	9,470	16,592		4,032	4,468	8.500 8.222	00	00	0.0	53,148 53,148	65.666 56.213	118,814

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Description/Item	#15. E. 6. F. 7. C. 7.	fotal x Million F Fin.L.C. Fin. Eco.L.C. Eco.	ion Ris Fin.Total Eco.Total	24 E. E. C.	1993. x Million RIS Fin.1.C. Fin.Total Eco.L.C. Eco.Total	Ris tal tal %	513. F.C. F3	x Million RI x Million RI Fin.L.C. Fin.Tcta Eco.L.C. Eco.Tota	n Ris Total Total %	Fin. F. C. Boo, F. C.	1995 X Mil Fin.1. C. E	Million Ris Fin. Total Eco. Total
H. Amol East District(II)	÷.											
1. I. Storage Dam	0.0	0.0	96			11						
1.2. Diversion Dam	107	191	268	-								
1.3. Hain Canal/Drain	928	1,037	1,965			·					٠	
Fereydon Kenal Drain	328	135	484									
1.4. Secondary Canal	329	116 754	2, 298								•	
1.5. Tertiary Canal	1,544	637	2.15b				:					
1.6. Land Consolidation	12.203	5, 753	838 17.956									
1.7. River Training	181	4. 4. 8. 60 (	259		,							
1.8. 0/N Road	327 327	17	346					٠				
I.9. Miscellaneous	327	8 G (	સુ જ									
- AE-II Sub-Total (I) -	15,996 15,996	8,572 7,727	24,568 23,723	00	00	90	0.0	00	90	00	00	00
2. Produzement of Equipment	3.410	330	3,740									
3. Survey & Investigation	4.410 255 250	551	5010 5010 5010 5010 5010 5010 5010 501						56	130	276	406
4. D.D. and Supervision	2,460	3,232	5.692						٠.	3	•	;
S. Suilding/Meter Pool	005.	80.7	200			20	<b>a</b> 0 (0	12	20 50 18	22	30	50
8. Land Acquisition	200	1,355	1.395					2	}	3	;	•
Ann Compensation 7. O & M Equipment	405	5 57 ° 7	450									
8. Administration (% of 1.) 5%	000	2 4 L	1,229	00	00	00	90	00	00	00	00	<b>0</b> a
<ol> <li>Physical Contigency 10 % (% of 1.)</li> </ol>	1,500 1,500	262 773	2,457	.00	) <b>0</b> 0	, O Q	.00	.00	000			00
- AE-II·Iotai (1~9) -	24,970	15,471	40,441	••		0 D	≪0 en	12	18 18	150	306 245	456 395
10. Price Contingency F.C. 4.8 % L.C. 15.5 %	38,466	57,048	95.514 88,330		00	20	თთ	13	22 22	173 173	47 <u>1</u> 377	550
Total	63,436	72,519	135,955	00	0	00	17	28 23	45	323 323	777 622	1,100
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			, , , , , , , , , , , , , , , , , , , ,	1					1			

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Description/Item	5.00 E.C. F. C.	1936 . x Mill Fin.L.C. Fi	Million Rls Fin.Total	810.7.C.	2997 X M1 Fin.L.C. F	Million Rls C. Fin. Total	Fin. F. C. Eco. F. C.	1998 x N. Fin. L. C. Eco. L. C.	98 X Million Ris L.C. Fin.Total L.C. Eco.Total %	Fin. F. C. Boo. F. C.	1999 x Mi Fin.L.C. Eco.L.C.	1999 x Million RIS Fin.L.C. Fin.Total EcolL.C. Eco.Total	
H. Amol East District(II) 1. Construction Ocst 1.1. Storage Dam				• • • • • • • • • • • • • • • • • • •		01	0	0	0 10			0	
1.2 Diversion Dam	30 32	80	80 40	4	64	107 30	32 0	0.84	다 다 닭	6	Ö	0	
I.3. Main Canal/Drain	32	44	76	44.Q	58 104	101 197 15	32	44 156	76 295 15	139	156	295	
Fereydon Kenal Drain		-		က တ		178	138	128	267	139	128	267	
I.4. Secondary Canal				•		.10	154	75	229 15	232	113	345	
1.5. Tertiary Canal						10	154 33	<b>ន</b> នៈ	215 102 15	232	8 8	324	
1.6. Land Consolidation							89 87	45	84 15	1,830	853	126 2.693	
1.7. River Training		÷	· .			• .			15	1,630	817 12	2.647	
I.8. 0/K Road									15	27	සු <b>ෆ</b> ්	37	
1.9. Miscellanequs	-								15	<u>a</u> 0	40	ည် သို့ ဝ	
- AE-II Sub-Total (1) -	32	48	30 76	136	168 143	304 279	363	343	706	2,334	1,243 I,120	3.577	
2. Producement of Equipment		٠.				20	1,705	165	1,870 50	1,705	165	1.870	
3. Survey & Investigation	50 130	276	405				1.705	132		1,708	132	1.837	
4. D.D. and Supervision	2	****	φ, Τςς,	123	162	285 15	898.	485	854 15	388	485	88	
5. Building/Motor Pool	30 12	18	30	277	577	767	2	8	7	80°	8 8 8 8	). (c)	
6. Land Acquisition and Compensation 7. O & M Equipment	<b>!</b>	•	20	0,0	55 8 8 8 8 8	698 50 558	00	က ရာ တ ရာ တ ရာ	55 68 55 68		•	·	-
8. Administration (% of 1.) 5 %	77 (	. 76	4.	7	<b>∞</b> 1	15	138	17	32	117.	29	179	
9. Physical Contigency 10 % (% of 1.)	ଧ ଓ ଓ	755 4	+ co ⊦~	7 2 7	17	14 31 28	9999 9999	34 28 28	70 70 84	233 233	58 124 112	173 357 345	
- 4E-II·Total (1~9) -	179	349	528	280	1,053	1,333	2,491	1.742	4.233	4,758	2.079	6.837	
10. Price Contingency F.C. 4.8 % L.C. 15.5 %	216 216	621 507	837 723	354 354	2.164	2.518 2,103	3,300	4,136 3,321	7,436	6, 606	5,701 4,958	12,307	
Iotal	385	970	1,365	634	3,217	3,853	5,791	5,878	11.669	11,364	7,780	19.146	44

TABLE E.2.2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

										1		
Work Description/Item	100 H	200 Fin. 1 Eco. 1	Million RIS C. Fin.Total	8 60 F C	2001 x Kil Fin.L.C. F	I x Million Rls .C. Fin.Total .C. Eco.Total %	Fin. F. C.	2002 X Mil Fin.L.C. F Eco.L.C. E	2 x Million RIs .C. Fin:Total .C. Eco.Total %	[14 (F)	Fin. F. C. Eco. F. C.	2003 x Hillion in F.C. Fin.L.C. Fin.To co.F.C. Eco.L.C. Eco.To
H. Amol East District(II)									 			
1. Cuistruction cust	15 0	0 (	0 15	0	0	0 15	0	0	0.15		ė,	0
1.2. Diversion Dam		Ð	3	0	<b>.</b>	<b>.</b>	o .	Б	:		<b>=</b>	
1.3. Main Canal/Drain	15 139	159	295 15	133	355	295 15	139	156	295 15	-	139	
Fereydon Kenal Drain	2		107	20	071	37	2	3	05 50		165	
1.4. Secondary Canal	15 232		345 15	232	133	345 15	232	E113	345 15		232	
1.5. Tertiary Canal	15 57	386	153 15	57	7 8 6 7 8 6	153 15	57	286 286	153 15		22	
1.6. Land Consolidation	15 1.830		2,693 15	1,630	80.0	2,693 IS	1,830	983	2.693 15	.i,	386	
1.7. River Training	1.530		0	27	122	•	27	12	39 15	-	272	
I.S. D/M Road	27 15 49		37 52 15	49	0 .e	37 52 15	27	ဥက	37 52 15		43	
1.9. Miscellaneous	15 0	*0	53 0 15	6. 0.0	40	53 0 15	on O ∙	40	53 0 15		တ္ ထ	67
- A£-11 Sub·Tatel (1) -	2,334 2,334 2,334	1,243	3,577	2,334 2,334	1,243	3,577 3,454	2.334 2.334	1,243	3,577	4,4,	2,499 2,499	ᆏᆑ
2. Procurement of Equipment												
3. Survey & Investigation												
4. D.D. and Supervision	369	485	854 15	989	485	854 15	369	485 835	854 15	86.8	363	23 28 28 28 28
5. Building/Mater Pool	9		2	9	9	2	,	3	2	5	3	
6. land Acquisition and Compensation 7. 0 & M Equipment									•			
8. Administration (% of 1.) 5 %	117	67.6	179	117	92	179	117	62	179	14 1	K) i	
<ol> <li>9. Physical Contigency 10 %</li> <li>(% of 1.)</li> </ol>	233 233 233	35 124	345	233 233 233	35 124 112	345	233 233 233	124	357 345	250 250 250	100	131
- AE-JI-Total (1~9) -	3,053	1,914	4.957	3.053	1,914	4,967	3.053	1,914	4.967	3,243	22	13 1,893
<pre>10. Price Contingency F.C. 4.8 % L.C. 15.5 %</pre>	4,442		10.504 9.750	4.656	7,601 B,131	11.657	4,879	8,087 7,081	12,966 11,960	5,432	32	
.ctal	7,495	7.976	15,471	7,709	8.915	16.624	7,932	10,001	17,933	ທີ່ໜຶ່	675	75 11,718 75 10,248
									1			

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

Work Description/Item	55 150 17.0 17.0	2004 X Fin.L. Eco.L.	Million Rls C. Fin.Total C. Eco.Total 2	713 800.8 7.0	2005 x Millis Fin.L.C. Fin. Eco.L.C. Eco.	Million Ris C. Fin.Total C. Eco.Total %	Fin. F. C. Eco. F. C.	2006 x Million RIS Fin. L.C. Fin. Total Eco. L.C. Ecc. Total	8 800 F.C.	Total x Kill Fin.L.C. Eco.L.C.	llion RIS Fin. Jotal Eco. Total
H. Amol East District(11) 1. Construction Cost 1.1. Storage Dan 1.2. Diversion Dan	0 01	0 0	0 10	00	D 0	00	·		0 0 0 10 10 10 10 10 10 10 10 10 10 10 1	009	282
1.3. Main Canal/Drain						•	,		107 927 927	1,040 1,040 853	253 1.967 1.780
Fereydon Kenal Drain 1.4. Secondary Canal	50 165 165 15	58	•						3330 330 345	136	466
1.5. Tertiary Canal	232								1.546 380	18 85 12 85	2,159
1.6. Land Consolidation	15 1.830 1,830		~ ~	1,220	575 545	1,795			350 12,200 12,200	5,753 5,753	840 17,953
1.7. River Training	٠.		8.69	S 60 6	<b>80</b> t~ t	25			180	80	247
1.6. V/R Modu 1.9. Miscellaneous	15 0			260	<b>100</b>	: දුණු ප			327 327 0	27.0	354
- AE-II Sub Total (1) -	2.350 2.350	44	3,515 3,410	1,271 1,271	585 555 555	1.856 1.826	00	00	15,997 15,997	8,582 7,729	24,579 23,726
2. Procurement of Equipment						+ - +,	1		3,410	330	3,740
3. Survey & Investigation				-					3.410	264 552	3, 574
	5 123	152	285 252						250 2,460 2,460	3, 234 2, 586 2, 586	702 5.694 5.048
<ol> <li>Building/Mater Peel</li> <li>Land Acquisition</li> </ol>									40	60 48 1,396	100 1.398
and Compensation 7. O & N Equipment	50 203			203	53	226			405	1,115	1,118
8. Administration (% of 1.) 5%	203 118		٠	203	23 gg	17 65 6	00		•	38 4738 33	1,230
9 Physical Contigency 10 % (% of 1.)	236 236 236 236	116	352 341	127 127	9 6 6 9 6 6	186 183	90,0	000		858 773	2,456 2,371
- AH-II ·Total (1~9) -	3.040	1.514	4.554	1.665	696 557	2,361	60	00	24,973	15,486	40,459
<pre>10. Price Contingency F.C. 4.6 % L.C. 15.5 %</pre>	5.336 5,336	8.533	13.859	3,063	4,531	7.340	96	0 0	38,486 38,466	57.048	95.514 88.330
Tetal	8.376	10.047	18.423	4.728	5,227	9,955	0	0	63,439	72.534	135.973

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

												٠.,	
Work De	Work Description/Item	# # # # # # O D	Total x Mill Fin L.C. Eco. L.C.	ral X Million Ris L. C. Fin. Total L. C. Eco. Total	Fin.F.C.	H H B	993 X Million Ris L.C. Fin.Total L.C. Eco.Total	75 F. C. C. F. C.	1994 × Mil Fin.L.C. F	* Million Fls .C. Fin.Total	25 25 27 27 20 20	1995 X Million RIS Fin.L.C. Fin.Total Eco.L.C. Eco.Total	95 x Million RIS L.C. Fin.Total L.C. Eco.Total
I. Amol East District(III) 1. Construction Cost 1.1. Storage Dam	[ East District(III) Construction Cost 1.1. Storage Dam		0	0		, , , , , , , , , , , , , , , , , , ,							
1.2. 0	1.2. Diversion Dam	153		33.0						:			
1.3. 1	1.3. Mein Canel/Drain	1,421	1,506	2.927									
Œ.	Fereydon Kenal Drain	424.1		758									•
1.4. St	1.4. Secondary Canal	1,090	0 44 0 0 44 0	1.730	é							-	
1.5. Te	1.5. Tertiary Canal	2,098				.*							
1.6. 14	1.6. Land Consolidation	21.211		35,032									
1.7. 81	1.7. River Training	259		370								÷	
1.8.0/	1.8. D/M Road	898 898 898		387									
1.9, Mi	1.9, Miscellaneous	000		904						٠			
- AE-III	- AE-III Sub-Total (1) -	27.138 27,138	18,444	45,582 43,819	00	0 0	00	<b>©</b> 0	00	00	00	00	00
2. Procure	Procurement of Equipment	4.433	429	4,852									
3. Survey	Survey & Investigation	432	910	1,350			50	0 215	25.5	675 50	215	459	675
4. D.D. and	D.D. and Supervision	3,198	4,202	7,400				017	9	300	017	D D	9
5. Buildin	Building/Notor Pool	6. Lg 8.22 8.22 8.33	797	6, 59C			. 20	0 10	10 6	26 50	25	38	38.7
6. Land Ac	Land Acquisition	30	2,325	2,325				3	‡	1	3	;	õ
7. 0 & K E	and Compensation O & K Equipment	675 675	1,860 75	1.860									
8. Adminis	Administration (% of 1.) 5 %	1,857	922	2.279	Φ.	0	00	00	00		0.0	00	0.0
9. Physica	Physical Contigency 10% (% of 1.)	2,714	1,064	4,558 4,382	900	300	<b>&gt;</b> • •	900	900	900		900	900
- 4E-III ·	- 4E-III·Total (1~9) -	39,389	29,237	69, 236	00	<b>0</b> 0	00	226 226	379	701	242	398 398	740
10. Price Cantingency	dantingency F.C. 4.8 % L.C. 15.5 %	63,451 53,451	120,132 106,577	163.583		00	0 <b>0</b>	248	634 506	882 754	279	757 613	1.046 892
1 1 1 1 1 1 1 1 1 1	Total	103.450	149,369	252,819	<b>60</b>	00	0.0	474	1,109	1,583	521 521	1.265	1.786
										1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			

TABLE E. 2. 2. 14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

														:	
lac.	Wark Description/Item	i 94	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1596 1896 Fin.L.C. Eco.L.C.	llion Rls Fin Total Ecc.Total	Fin F.C.	1997 X M Eco.L.C.	Million RIS Fin Total Eco.Total %	Fin. F. C.	1938 x Kil Fin.L.C. F Eco.L.C. E	Killion Rls C. Fin-Total C. Eco.Total	Fin F. C.	1999 x Mi Fin L.C. Eco.L.C.	Million Ris C. Fin.Total C. Eco.Total	
I. Amol Ed	I. Amol East District(III) I. Construction Cost I.l. Storage Dam	1		·	:			10	0.0	00	01 0	9 (	00	0.0	
77	<ol> <li>Diversion Dan</li> <li>Nain Canal/Drain</li> </ol>	8	4 40	63	115 40 108 10	0 61	11. 832	153 30 144 . 293 15	213 4 5 C	69 82 226 226	115 108 439 15	12.2	226	າ .	
- :	Fereydon Kenal Drain		-	:		7F			213	186	988	213	186	35 55 55 55 55 55 55 55 55 55 55 55 55 5	
1.4	<ol> <li>Secondary Canal</li> <li>Tertiary Canal</li> </ol>			\$ .	·			10	109 109 210	64 51 190	173 10 150 400 10		51 130	160	
	1.6. Land Consolidation								210	143	353	2,121	1,382	3,503	
17 80 17 mi	1.7. River Training 1.8. 0/8 Road										01 .	26 26 37	11 11 2	37 37 38 38	
	I.9. Miscellaneous				: .							500	, e	000	-
- AE	- AE-III Sub-Total (1) -		46 46	62	115	203	3 243 3 207	446	578 578	549	1,127 1,020	2.716 2.716	1,875 1,691	4.591	
2. Pro	Procurement of Equipment Survey & Investigation							50	2,217	215	2,432 50	2,217	215 172	2,432 2,389	
6. D.D	D. D. and Supervision	É	<u></u>		. е	160	0 210 0 168	370 10 328	320	420 336	740 15 856	480	504	1.110	
	burtaille Anguisition Land Acquisition and Compensation C & M Equipment	3	19	15	88 88		0 1,153	1,163 50 930	00	1,163	1,163				
8. Adm 9. Phy	Administration (% of 1.) 5 % Physical Contigency 10 % (% of 1.)		. ମଧ୍ୟର	യപയ	8 8 Z I	10 10 20 20 20	0 112 0 24 0 214	22 22 24 44 11	28 28 28	22 22 44 44	56 51 113 102	136 136 272 272	94 188 169	230 221 460 441	1.7
10. Pri	- AE-III.Total (1~9) - 10. Price Contingency F.C. 4.8 % L.C. 15.5 %	::	<b>9</b> 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	102 90 182 160	171 159 265 243	393 393 497 497	3 1,552 3 1,336 7 3,396 7 2,748	2.045 1.729 3.893 3.243	3,202 3,202 4,242 4,242	2,429 1,946 5,767 4,620	5.631 5,148 10,009 8,862	5,821 5,821 8,082 8,082	3,002 2,621 8,232 7,187	8,823 8,442 36,314 I5,269	
	Total		152	284 250	436	0.68 0.68	0 5.048 0 4.082	5.938	7,444	8,196 6,586	15.640	13,903	11,234	25.137	

TABLE E. 2. 2-14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

													1
Work Description/ltex	• • • • • • • • • • • • • • • • • • •	Fin. F. C.	2000 x Million Ris Fin.L.C. Fin.Total Eco.L.C. Eco.Total	lion Ris in. Total	12 G	Z001 × Mill Fin.L.C. Fi	Million Rls Fin Total	### ### 0.0	2002 x Killion Rls Fin.L.C. Fin.Lotal Eco.L.C. Eco.Total	ion Ris in.Total	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2003 x Million Rls Fin.L.C. Fin Total Eco.L.C. Eco. Total	lion Ris in Total
I. Amol East District(II) 1. Construction Cost 1.1. Storage Dam	. ≌ !	00	000	0 15	. 00	00	0 15	0	00	0 15	00		00
1.2. Diversion Dam												٠	
1.3. Main Canal/Drain	35	213	225	439 15	213	226 186	439 IS	213	226 186	439 15		225 186	439
Fereydon Kenal Drain		3	9	î •	1		3			δŷ		110	379 364
1.4. Secondary Canal	15	164	98	260 15		96 76	260 - 15	364	96	260 15	164	96	260
1.5. Tertiary Canal	15	315	285	600 IS		285	600 15	315	285	600 15 529	315	285	529 529
I.6. Land Consolidation	10	2,121	1,382	3,503 15		2,073	5,255 15	3,182	2,073	5,255.15	3,182	2,073	5,255
1.7. River Training	10	25	11,23	37 15		1,340	56 15	988	71	56 15	0.00	17	6 es
1.8. 0/% Road	10	37.6	n 64 6	36 15	10 to to	r co u	58 15	្ត ស្តេស ស្តេស	ကြေးရ	58 15	HA HA HAS HA		88 69
1.9. Miscellaneous	97	; = =		\$1 0 2 0		, e c	0 15	900		0 15	00	00	00
- 4E-ID Sub-Total (1) -	-	2,876	2,002	4,878	3,968 3,968	2,700	6,663 6,411	3,988 3,988	2,700	5,668 6,411	4.237	2,810	5.775
2. Procurement of Equipment													
3. Survey & Investigation									٠				
4. D.D. and Supervision	13	480	630 504	1,110 15	480	530	1.110 15	480 480	630 504	1,110 10 984	320	420 336	740 655
5. Building/Motor Pool		3	:	}	<u>:</u>		}						
6. Land Acquisition	•			. •									
Ann Compensation.													
8. Administration (% of 1.) 5	<del>3</del> %	144	100	244	198	135	330	1 1 1 9 8 8 1 1 9 8 8	135	333 320	212	141 127	353 339 3
9. Physical Contigency 10 (% of 1.)	<b>3</b> %	288 288 288	200	488 488 467	397	270 244	667 641	397	270	557 641	424	281	705 678
- AE-III·Iotal (1∼9) -		3,788	2,532	6,720	5,043	3,735	8,356	5,043	3, 313	8,356	5,193	3,652	8,845 8,448
<ol> <li>Price Contingency</li> <li>F.C. 4.8</li> <li>I.C. 15.5</li> </ol>	96.75	5,512	9.286	14.798 13.616	7,690	13,662	21.352	8,059	15.780 13,997	23,839 22,056	8,697 8,697	17.821	26,518 24,581
lata]		9,300	12,216	21.518	12,733	17,397	30,130	13,102	19,515	32.617	13.890	21,473	35.363
	1	9 300	10,563	19,963	12,733	15,432	56, 183	19.102	0.75.7.	77 1 600			

TABLE E. 2. 2. 14 ANNUAL DISBURSEMENT SCHEDULE BY SUB-DISTRICT-WISE (WITHOUT MANGOL DAM CASE)

					***********	******			-			
Work Description/item	Fin. F.C.	2004 ; x Fin.L.C Eco.L.C	Million Rls Fin-Total Eco.Total	Fin.F.C. Eco. F.C.	2005 x Mil Fin.L.C. F Eco.L.C. E	Million Ris Fin. Total	Fin. F. C. Eco. F. C.	2006 x Million Fin.l.C. Fin.fc Eco.l.C. Eco.fc	llion Rls Fin, Total Eco. Total	Fin. F. C. Eco. F. C.	Total x Million Fin.L.C. Fir Eco.L.C. Eco	on Ris Fin. Total Eco. Total
I. Amol East District(II) I. Construction Cost 1.1. Storage Dam	10 0	0	0 10	0	0	0	# 			6	0	0
1.2. Diversion Dam	O	a	0	0	0	0				153	0 230	983
1.3. Main Canal/Drain			* .			-				153	207	360
Fereydon Kenal Drain	50 269		379							1,420	1,240	2,660
1.4. Secondary Canal	10 109		173 10	109	54	173	•			538	190 540	728
1.5. Tertiary Canal	10 210	•	150 400 10	210	51 190	160				1,092	508 1,900	1,500
1.6. Land Consolidation	210 15 3,182	2.073	353 5,255 10	2,121	1,382	3,503 10	2,121	1,382	3,503	21,212	1,428	3,528
1.7. River Training	15 38		56 10	28	1,299	3,420	2.121	1,299	3,420	21,212	12,988	34.200
1.8. 0/N Road	15 55		28 10 28 10	26.6	50 121	33 33 36	328	cs 64 6	ន្តន	368 368	35 20	352
1.9. Miscellaneous	15 0		90 10 90 10	<u> </u>	m 0	40 0 10	37	m O	ĝ o .	898 898 898 898 898 898 898 898 898 898	325	00 <b>4</b> 00 0
- AE-H Sub-Total (1) -	3,864	2,457	6,321 6,120	2,503 2,503	1,649 1,505	4,152 4,008	2,184 2,184 2,184	1,395 1,311	3,579 3,495	27,143 27,143	18,449 15,685	45,592 43,828
2. Procurement of Equipment				•						4.434	430	4,884
3. Survey & Investigation					٠					4,434	344 918	1.350
4. D.D. and Supervision	10 320	420	740 5	160	210	370	. :	-		3,200	734	1,166
5. Building/Notor Pool	070	922	8 0 0	180	897	328	**			3,200 52	3,360 78	8,550 136
6. Land Acquisition and Compensation 7. O & M Equipment			<b>5</b>	338	8	376 50	338	ි සි	376	67 9 9 9 9 9	2,326 1,860 76	2,326 1,860 752
8. Administration (% of 1.) 5 %	193	123	316	125	등 않	368 207	8 5 E	82	388	676 1,356	60 922	736 2,278
9. Physical Contigency 10 % (% of 1.)	386 386 386	246 246 226	632 632 612	250 250 250	75 185 151	415 401	109 218 218	140 131	358 349	1,356 2,715 2,715	834 1,846 1,669	2,190 4,561 4,384
- AE-W-fotal (1~9) -	4,763	3,245	8,009	3,376	2,144	5,520	2,849	1,643	4.387	40,008	29,245	69,253
10. Price Contingency F.C. 4.8 % L.C. 15.5 %	8,360	18,295	26.655 24.880	6,210 6,210	13,957	20,167 18,767	5.482		17.845 17.055	63,451	120,132	183,583 170,028
Total	13,123	21.541	34.664	9,588	16,101	25,687	6.341	13,996	22.337	103,459	149,377	252.836
								ŀ				

# E. 3 Project Evaluation

The procedure for Project Evaluation was mentioned in the main report. Here, the materials, process of calculation for the evaluation were given in tables, the titles of which are listed below:

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Table E.3.1-1 Recent Trends in Currency Exchange rate Between US\$ and Rial

Year	Month	Basic Rate	Year	Month	Basic F	Rate	Competit	ive	Floating
1985	MAR.	93.54	1989	MAR	71 10	1000	rate	000.0	rate
1900	APR.		1909	APR	71.10	1909		,000.0	-
	APR. MAY	93.32 92.81		MAY	71.74		APR		-
	JUN.	91.52		JUN	74.36	1000	MAY		<del>-</del>
	JUL.	89.57		JUL	73.22 72.81		JUN JUL		
	AUG.	90.11		AUG	74.31			_	
	SEPT.	86.98		SEP		•	AUG	-	<del>-</del>
	OCT.		•		72.86		SEP		
	NOV.	86.05 84.81		OCT NOV	72.40 71.47		OCT	_	
	DEC.	84.40		DEC	71.47		NOA	000 0	
1005	Average	88.05	1090	Average		1000	DEC	900.0	
1986	JAN.	83.14	1990	JAN			Average		=
1900	FEB.	80.33	1990	FEB	69.75	1990	JAN	: . <del>-</del>	
	MAR.	81.12		MAR	70.35		FEB		
	APR.	78.59		. APR	· · · · · · · · · · · · · · · · ·	1	MAR	· <del>-</del>	
	MAY						APR	- 15.5 <mark>7</mark> 1	·
	JUN.	79.59 78.30		MAY	eo as		MAY	000 0	<del>-</del>
	JUL.			JUN	68.25		JUN	870.0	-
	AUG.	76.78 76.17		JUL	<del>-</del>		JUL	_	<del>-</del>
				AUG			AUG		_
	SEPT. OCT	76.02 77.11		SEPT.	-		SEP	<del>-</del> .	<del>-</del>
	NOV.	76.75	. :	OCT NOV	67.10		OCT	000 0	
	DEC.	76.75 75.20		DEC	07.10		NOV	800.0	<del>-</del>
1000	Average		1000		-	1000	DEC	_	-
1987	JAN.	73.10	1991	Avera JAN	-		Average	۳.	rate system
1901	FEB.	73.10	1551	FEB	-	1991	JAN	. <del>-</del>	starting
	MAR.	71.80		MAR	68.17		FEB MAR	700 0	1,332
	APR.	70.73		APR	00.17	•	APR	700.0	1,368
	MAY	71.39		MAY			MAY		1,353
	JUN.	72.44	j.	JUN			JUN	. · - ·	1,344
	JUL.	73.12		JUL	~ <u>-</u> -		JUL	_	1,383
	AUG.	71.42		AUG	66.82		AUG	600.0	1,342
	SEPT.	71.68		SEPT.	20.00		SEP	กกัก ก	1,355
	OCT.	69.34		OCT			OCT		1,393
	NOV.	67.42		NOV			NOV		1,407
	DEC.	66.29		DEC	65.75		DEC		1,392
1987	Average	70.10	1001	Average		1001	Average		1,421
1989	JAN.	67.83	1992	JAN	64.85				- 1 420
1000	FEB.	67.71	1002	FEB	66.24	1004	FEB .	592.2	1,420 1,420
	MAR.	66.82		MAR	00.24		MAR	592.2	the state of the s
	APR.	66.85		APR			APR	592.2	1,435
	MAY	67.70		MAY	71.06		MAY	592.2	1,435 1,450
	JUN.	70.41		JUN	-		JUN	592.2	1,435
	JUL.	71.13		JUL			JUL	592.2	1,435
	AÚG.	71.33		AUG	62.76		AUG	592.2	1,435
	SEPT.	70.78		SEP	74.77		SEP	592.2	1,435
	OCT.	68.58		OCT	64.12		OCT	592.2	
-	NOV.	68.69		NOV	66.15		NOV	592.2	1,455
	DEC.	69.08		DEC	66.70		DEC	592.2	1,455
1989	Average		1992	Average		1002	Avera	592.2	1,435 1,437
1989	JAN.	70.18	1000	m ct apc		1000	UACE ()	JJ4.4	1,401
1000	FEB.	70.19			urce ·	Ληημ	al Ctatio	tice b	Central Bank
	r ED.	10.10		50	urce :	BHILL	ai piatis	LICS D)	central bank

Table	E.3.1-2	Shadow	Exchange	Rate	for	Shadow	Price

				unit : mil	lion Rial
Item	Mean Value	Average %	Share in	Rate of	Weighted
	<u> 1985 -1989</u>	Custom Duty	Trade Value	Composition	Average
Major Imports		(x)		(y)	(xy)
vehicles/parts	54,812	182.0		12.2%	22.3%
machinery	171,630	27.0		38.3%	10.4%
plastic material	91,999	20.0		20.5%	4.1%
cereals/flour	50,839	15.0	* * * * * * * * * * * * * * * * * * * *	11.4%	1.7%
steel material	78,435	19.0		17.5%	3.3%
Sum of the above	447,715		34.9%	100.0%	41.8%
Major Exports		***			:
oil/oil products	825,793	0.0	•	99.0%	0.0%
carpets	4,269	-10.0		0.5%	-0.1%
fruit/nuts	3,855	-5.0		0.5%	0.0%
Sum of the above	833,917		65.1%	100.0%	-0.1%

Shadow Exchange Rate = Sum of Trade Share x Weighted Duty Rate =  $34.9 \times 0.418 - 65.1 \times (-0.001) = 14.6\%$ 

When the rate is applied to the exchange rate for capital goods for production , or 600 Rial/US\$, the undistorted rate will be given as :  $600 \text{ Rial/US}\$ \times (100 + 14.6)/100 = 687.6 \text{ Rial/US}\$$ 

Table E.3.1-3 Standard Conversion Factor of the Project

Trade Item	1985	1986	1987	1988	unit : 1989	million Rial Average
Total Exports (1) Total Imports (2) Import Taxes (3) Export Subsidy(4) Export Taxes (5)	1,058,345 250,000 264	521,883 720,700 195,000 264 0	873,598 658,900 152,900 264 0	744,567 567,923 107,200 264 0	1,122,121 927,257 160,900 264 0	893,449 786,625 173,200 264 0
	S.C.F. =	{(1)+(2)}	/ {(1)+(2)-	+(3)+(4)-(	(5)} =	0.906

#### Table E.3.1-4 Other Conversion Factors of the Project

#### (1) Conversion Factor for Un-Skilled Labor

Basic Situations: (1) Estimated Agricultural Labor Available in the Project 52,086 (labor force, mainly male covers 1.58 ha/man)

(2) Estimated Agricultural Share in Total Labor
Opportunities 44.2 % x (100 - 9.8)/100
= 39.9 % Estimated Unemployment Rate: 9.8 %

(3) Suppliable family labor is estimated as 1/1.58 ha x 17.5 mandays / month = 11.1 days/month/ha.

Monthly Distribution of Farm Labor Supply/Demand in the Project Area

· · · · · · · · · · · · · · · · · · ·						99
			1.71		unit: man	day
Month Crop	ProjectLabor	Labor	Supplied	by Hired	Seasonal	Hired Labor
	Availability	Demand	Family L.	Labor	Labor Wage	Cost
JAN UPLAND CROP	11.1	1.0	1.0	0.0	7,729	0
FEB D.O.	11.1	2.6	2.6	0.0	7,729	0
MAR D.O.	. 11.1	4.5	4.5	0.0	8,310	0
APR PADDY	11.1	11.5	6.5	5.0	8,310	41,550
MAY D.O.	11.0	14.7	8.8	5.9	9,660	56,994
JUN D.O.	11.1	3.9	3.9	0.0	8,310	0
JUL D.O.	11.1	8.1	4.1	4.0	8,310	33,240
AUG D.O.	11.0	19.8	7.2	12.6	10,240	129,024
SEPT D.O.	11.1	11.8	5.5	6.3	9,050	57,015
OCT UPLAND CROP	11.1	3.0	3.0	0.0	8,310	. 0
NOV D.O.	11.1	: 2.5	2.5	0.0	7,729	0
DEC D.O.	11.1	2.0	2.0	0.0	7,729	0
					average	
TotalPADDY+UPLAND	133.0	85.4	51.6	33.8	8,451	317,823

Labor cost Ratio (hired wage/family wage) = 317.823/33.8\*8451 = 1.11Conversion Factor for Unskilled Labor =  $33.8/(133.0 - 51.6) \times S.C.F.$ =  $0.415 \times 0.906 = 0.376$ 

Note: Hired labor available within the project area estimated at 0.23/ha/day of which 0.09 can be presently absorbed.(around 40 % of active supply)

#### (2) Conversion Factor of Skilled Labor

Skilled labor in the project area is much less available than unskilled, so the conversion factor thereof can be equal to that of consumer's goods, for which S.C.F. can be applied to, i.e., 0.906.

#### (3) Conversion Factor of Fuels

Domestic prices of fuel in oil producing countries are generally subsidized thus an adjusting factor should be applied to currently prevailing prices to make them in conformity with other economic ones. Generally speaking, OPEC reference price levels are employed as crude oil equivalent. Exchange rate of fuel/fuel products has been set at around 69 Rial/US\$ instead of 600, but in this calculation 600 Rial/US\$ is applied to unify the base of exchange, 1985-1989 5-year average price for OPEC arabian light = 20.6 \$/barrel(1591tr) imaginative kerosene price : 20.6 x 600 / 159 / 0.2 (extraction rate + processing cost) = 389 Rial/litre market price = 50 Rial / litre, subsidized farmer's price = 15 Rial / l,

389 / 50 = 7.77 or 7.8 So, the conversion factor is given as 7.8.

Table E.3.2.1 Recent Farm-Gate Price Rewcords in the Project area unit: Rial

and the second second							
YEAR/MONTH	TAROMRICE	KHAZAR	<u>HARAZRICE</u>	<u>TAROMASGRI</u>	AMOL-3	WHEAT	BARLEY
1991 AUG	855	656	650	607	580	160	115
SEPT	841	640	670	535	533	160	115
OCT	920	653	590	535	510	160	115
NOV	893	640	580	562	503	160	115
DEC	915	685	605	620	490	160	115
1992 JAN	982	707	590	640	509	185	115
FEB	1,134	840	640	735	558	1.85	135
MAR	1,209	920	675	825	580	185	135
APR	1,233	1,030	758	783	640	185	135
MAY	1,363	1,118	860	937	685	160	105
JUN	1,263	1,125	860	947	700	160	107
JUL	1,080	950	800	920	680	160	110
an'average PADDY-	1,057	830	690	721	581	<u>168</u>	<u>118</u>
EQUIVALENT	<u>661</u>	<u>519</u>	<u>431</u>	<u>450</u>	<u>363</u>		-
YEAR/MONTH	LETTUCE	CUCUMBER	BROADBEAN	DRY B.BEAN	GARLIC	COWS MEAT	COWS MILK
1991 AUG	·	150	. '-	320	300	2,300	150
SEPT		185	-	320	350	2,300	150
OCT	-	300	-	320	550	2,350	150
NOV		300	_	320	600	2,400	150
DEC	-	_	-	320	600	2,650	150
1992 JAN	-		_	320	600	2,900	170
FEB	100	900	-	320	600	3,300	170
MAR	70	600	-	320	600	3,450	170
APR	90	400	· -	320	375	3,450	200
MAY	2	250	100	320	225	3,670	200
JUN	_	180	120	320	225	3,670	200
JUL	<del>-</del> .	125	. <del>-</del>	320	200	3,700	200
an' average	<u>87</u>	<u>633</u>	<u>110</u>	<u>320</u>	<u>525</u>	3,400	<u>180</u>

Table E.3.2-2 Ocean Freight, Port Charge and Inland Transport

Route; Tokyo - Bandarkhomeini - via Tehran to Amol, Mazendaran Condition; C and F, insurance is negligible and omitted.

Cargo		nd F, insura ⊢Volume/Unit			*	+ 1	ght/cub.meter
		cubic meter					
						per ton	
Bulldozer		41.6	16.8	5,345	145	318.2	128.5
Bulldozer		44.6	22.6	6,130	220	271.2	
Back-hoe		35.5		4,360	85	335.4	122.8
Motor Grad	ler	58.9	13.2	7,235	120	548.1	
Dump Truck	ζ.	49.9	16.4	6,410	51	390.9	
Belt Conve	eyer	6.2	2.4		4	275.0	
in the a	bove c	alculation,	exchange i	rates are a	assumed as	120yen=1US	\$=600Rial
Cargo	Cargo	-Volume/Unit		Loading	Storing	Other Port	Handling
unit :		cubic meter	n tòn	Services	Demurrage	Charges	Cost/ton
		30020 110001	ia r don	<u>DOI 11000</u>	Demarrage	_onur 8co	COST/ CON
Heavy Mach	inery	139.9	58.7	108.1	15.9	2.7	2.16
Light Mach	ninery	423.9	19.7	36.6	5.4		2.18
after la	unding,	inland tran	sportation	n incurs th	nee follow:	ing charges	•
Item of Ch	narge	Basic Fee	Hire Char	o Storage	Trancnort	t Domines do	Cunahanga
<u> </u>	wrus.	per ton	of Traile	Cost/tor	Pariod	Coct/top	Heavy Cargo
unit of pr	rice :	1,000 Rial	y u	. dh	ysv.	1,000 Ria	
mire or Fr		1,000 1141	trailer/da	u.o.	uuy	per day	1 u.u.
Inland Tra	ınsport	20	720	29	80 - 120	29	1,300
Calculat	ted Tra	nsport Charg	e (Ocean J	reight +	Inland Tra	ansportatio	<u>n)</u>
Measureme							
Case 1	Heavy			ubic meter	127.9		
				cubic m.	0.9		
			Inland T.,	cubic m.	47.7	Total/m3	176.5
		• .					

Measuremen	t Cargo Basis					
Case 1	Heavy Machinery	Freight/cubic me	eter 12	27.9		
		Handling/ cubic	m.	0.9		
		Inland T./cubic	m. 4	7.7	Γotal∕m3	176.5
Case 2	Other Machinery	Freight/cubic mo	eter 11	17.5		
		Handling/ cubic	m.	0.1		
		Inland T./cubic	М.	8.2	Total/m3	125.8
Loading We	ight Basis				Tw.	
Case 1	Heavy Machinery	Freight / meter	ton 35	9.8	4	
		Handling/ meter	ton	2.0		
		Inland T./meter	ton 12	28.7 T	ľotal/t	490.5
Case 2	Other Machinery	Freight / meter	ton 27	75.0		
		Handling/meter	ton	0.3		
		Inland T./meter	ton 10	7.0	ľotal/t	382.3
Case 3	Grain,Fertilizer	Freight / meter	ton 12	8.4		
		Inland T./meter	ton 4	1.0	fotal/t	169.4

Table E.3.2-3 Estimated Economic Prices

er en				D / 1 /UOA	
- 45 1		_			unit : Rial
<u>Items/Products</u>		World		- ATTTM: T # 194	<u>Conversion</u>
	Mar	ket Price	Price	<u>Price</u>	<u>Factor / Unit</u>
D. D.	13) ] Wl. + 0000	000		1057	B 411 /b
	World Market 2000	265	434	1057	0.411 /kg
Rice Local H.Q.	+ transport	255	424	830 581	0.511 /kg
Rice HYV	= border price	244	413	901	0.711 /kg
Paddy Tarom	d.o. converted	166	271	661	0.410 /kg
Paddy Khazar	by milling rate	159	265	519	0.511 /kg
	for each case	153	258	363	0.311 /kg 0.711 /kg
Paddy Amol-3	Tur each case	155	230	300	0.711 / 115
Berseem Hay	World Market derived	81	156	81	1.926 /kg
Berseem Raw	of Alfalfa	22		22	1.864 /kg
DCESCON RUN	or arraira		1.4	20	1,001 / 110
Winter Vegetable	_	_	نب	110	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•		•		
Broadbean Dry	World Market derived	657	735	320	2.297 /kg
Broadbean Raw	border price	173	251	110	2.282 /kg
					4
Barley Threshed	World Market derived	36	55	74	0.743 /kg
					•
Fertilizer N	World Market derived	201	320	41	7.805 /kg
Fertilizer P	+ transport	529	648	72	9.000 /kg
Fertilizer K	= border price	168	287	50	5.740 /kg
Kerosene	OPEC price	339	389	50	7.780 ltr
	based estimation			(subsid'1	
Farm Labor Wage	conversion		3,178	8,451	0.376 m-d
(annual average)	factor		•		
Tractor 65HP	Japanese Market	43594300	47682716	49480300	0.964 set
	border price				_
Paddy Straw	<del>-</del> :		45	50	- /kg

Table E.3.2-4 Estimated Economic Production Cost of Rice

		1000			by econo	omic cost
MACHINERY COST SURVEY	RESULTS	FOR HYV	FOR LOCAL	C.F.		FOR LOCAL
plowing	73.8	73.8	73.8	0.838	61.8	61.8
puddling	17.2	17.2	17.2	0.838	14.4	14.4
spraying	7.8	10.1	5.5	0.838	8.5	4.6
collecting	13.6	17.0	10.2	0.838	14.2	8.5
threshing	94.8	118.5	71.1	0.838	99.3	59.6
TOTAL COST OF				14.00		
MACHINERY	207.2	236.6	177.8	0.838	198.3	149.0
MANUAL LABOR COST						
plowing	18.5	18.5	18.5	0.376	7.0	7.0
bunding	21.4	21.4	21.4	0.376	8.1	8.1
puddling	5.6	5.6	5.6	0.376	2.1	2.1
nursery	39.7	39.7	39.7	0.376	14.9	14.9
planting	. 103.9	103.9	103.9	0.376	39.1	39.1
manuring	6.2	8.4	4.0	0.376	3.2	1.5
irrigation	34.4	34.4	34.4	0.376	12.9	12.9
spraying	7.5	9.4	5.6	0.376	3.5	2.1
weeding	71.2	71.2	71.2	0.376	26.8	26.8
harvesting	115.5	144.4	86.6	0.376	54.3	32.6
collecting	43.9	54.9	46.3	0.376	20.6	17.4
threshing	40.9	51.1	30.7	0.376	19.2	11.5
canalalign	11.6	11.6	11.6	0.376	4.4	4.4
TOTAL COST OF						
FARM LABOR	520.2	574.5	479.5	0.376	216.0	180.3
FARM INPUT					* .	
paddy seed	25.8	18.4	33.2	0.906	16.7	30.1
fertilizers	-12.0	15.6	8.4	0.981	15.3	8.2
chemicals	10.3	12.9	7.7	1.000	12.9	7.7
herbicides	4.2	4.2	4.2	1.000	4.2	4.2
water fee	30.5	30.5	30.5	0.482	14.7	14.7
TOTAL COST OF						
FARM INPUT MATERIALS	82.8	81.6	84.0		63.8	65.0
TOTAL COST PER ha	810.2	<u>892.7</u>	741.3		<u>478.1</u>	394. <u>2</u>
	244.2	5051	1.1110		*****	001.0

# Estimated Economic Prices of Rice

PRODUCTS FARM-GATE	P./kg 1992	WORLD P.	FREIGHT	INLAND T	BORDERPRICE	C. FACTOR
rice HYV	581	222	78	41	341	0.587
rice KHAZAR	830	234	78	41	353	0.425
rice local	1,057	243	. 78	41	362	0.342
paddy HYV	363	139	78	41	258	0.711
paddy KHAZAR	519	146	78	41	265	0.511
paddy local	661	152	78	41	271	0.410
paddy straw	5	0	0	0	0	-

Table E.3.2-	5 List	of Fina	ncial and	Economic	Prices

•						unit:	Rial/unit
Section 1			Price			Pri	
Item	unit		<u>inancial</u>	Item			<u>Financial</u>
<u>Agricultural</u>				<u>Agricultura</u>	al Inpu	<u>ts (2)</u>	
Rice Tarom	- kg	434		Kerosene	1	389	50
Khaza	kg	424	830	Diesel	1	115	15
Amol-	kg	413		Feed Meal	kg		180
Paddy Taro	kg	271	661	Wheat Bran	kg		60
Khaza	kg	265	519	Agricultura	<u>al Mach</u>	inery	
Amol-	kg	258	363	Combine J.	1000	25,140	30,000
Rice Straw	kg	45	50	Combine W.	1000	19,274	23,000
Raw Bersee	kg	41	22	Thresher S	1000	268	320
Dry Bersee	kg.	156	81	Thresher L	1000	302	360
Raw Lettuc	kg	89	. 89	Tractor Ro	1000	4,693	5,600
Raw Radish	kg	110	110	Tractor FG	1000	5,866	7,000
Garlic	kg	435	435	Tractor JD	1000	11,732	14,000
Raw Bean	kg	115	115	Powertille	1000	1,215	1,450
Dry Bean	kg	735	320	P.Tiller K	1000	2,472	2,950
Barley	kg	55	74	Sprayer 20	1000	151	180
Wheat	kg	167	168	Trailer 5t	1000	1,048	1,250
<u>Agricultural</u>	Inputs	(1)		Combine 2m	1000	41,934	41,934
Fertilizer	kg	320	4 1	Tractor65H	1000	40,366	43,098
Fertilizer	kg	648	72	Trs' planté	1000	11,332	11,332
Fertilizer	kg	287	50	Agricultura	al Labo	ir	
Urea	kg	110	14	Plowing	man-	2,200	5,851
D.A.P.	k g	135	15	Bunding	man-	3,068	8,159
Potash	kg	150	25	Puddling	man-	2,569	6,832
Manure	kg	7	7	Nursery	man-	2,428	6,457
Macheti HD	kg	****	2,000	Manuring	man-	3,505	9,321
Ronstar IID	kg	****	2,200	Tr'plantin	man-	2,844	7,564
Satern HD	kg	****		Weeding	man-	2,133	5,672
Dimecron	kg	****	1,800	Spraying	man-	2,942	7,825
Diazinon	kg	****	1,400	Harvesting	man-	3,954	10,515
Hinozan	kg	****		Carrying	man-	4,028	10,712
Vitafax	kg	****		Threshing	mian-	3,752	9,980
Vegeta'see	kg	****		Other Costs			,
HYV seed	kg	****		Water Fee	Rial	0	30,500
A Company of the Comp							

Table E.3.3-1 Estimated Financial Crop Benefits of the Project

	(1)	Comparison	of Gross			tar eg e j
Crop	Stage	Crop Area	Yield			
		(ha)	(kg/ha)		(Rial/kg)	million R
Tarom Paddy		35,185	4,135		661	96,169
	W. P.	28,494	4,437	126,428	661	83,569
en e	1 " I					
Khazar	W.O.P.	32,275	5,741	185,291	519	96,166
	W. P.	28,494	6,378	181,735	519	94,320
				1.	April 1997	
Amol-3	W O.P.	12,509	7,375	92,254	363	33,488
	W. P.	18,997	7,972	151,444		
				1	• •	
Barley	W.O.P.	330	3,000	990	74	73
	₩. P.	0	3,000	0	74	0
Berseem	W.O.P.	5,450	52,500	286,125	22	
* *	W. P.	37,993		2,279,580	22	50,151
Broadbean	W.O.P.		2,500	475		52
	W D	330	2,500			91
Vegetables	W.O.P.	3,650	22,500			
	W P	6,290	22,500	141,525	105	
:	**** ***	. 0,200	22,000		100	11,000
Total	W.O.P	89,589	_	_		240,866
	₩. P.	120,598		· <u>-</u>		297,965
· <b>n</b>	ifference					57,099
	TITOT CHO	911000		*		91,000
		•				•
. (	2)	Comparison	of Net Ir	ncome from	Crons	
	2) Stage	Comparison				Net Income
	2) Stage	Cost/ha 199	2Cost/ha	Total Cost	Gross	Net Income
Crop _	Stage	Cost/ha 199 ( mil	2Cost/ha lion Rial	Total Cost	Gross Value pr	oject area
	Stage W.O.P.	Cost/ha 199 ( mil 0.7413	2Cost/ha lion Rial 0.8606	Total Cost ) 30,282	Gross Value pr 96,169	roject area 65,887
Crop _	Stage	Cost/ha 199 ( mil	2Cost/ha lion Rial	Total Cost ) 30,282	Gross Value pr	oject area
Crep Tarom Paddy	Stage W.O.P. W. P.	Cost/ha 199 ( mil 0.7413 0.7232	2Cost/ha lion Rial 0.8606 0.8396	Total Cost 30,282 23,925	Gross Value pr 96,169 83,569	oject area 65,887 59,644
Crop _	Stage W.O.P. W. P. W.O.P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927	2Cost/ha lion Rial 0.8606 0.8396	Total Cost 30,282 23,925 33,451	Gross Value pr 96,169 83,569	65,887 59,644 62,715
Crep Tarom Paddy	Stage W.O.P. W. P.	Cost/ha 199 ( mil 0.7413 0.7232	2Cost/ha lion Rial 0.8606 0.8396	Total Cost 30,282 23,925	Gross Value pr 96,169 83,569	oject area 65,887 59,644
Crop Tarom Paddy Khazar	Stage W.O.P. W. P. W.O.P. W. P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058	Total Cost ) 30,282 23,925 33,451 25,810	Gross Value pr 96,169 83,569 96,166 94,320	65,887 59,644 62,715 68,510
Crep Tarom Paddy	Stage W.O.P. W. P. W.O.P. W. P. W.O.P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058	Total Cost 30,282 23,925 33,451 25,810 12,965	Gross Value pr 96,169 83,569 96,166 94,320 33,488	65,887 59,644 62,715 68,510 20,523
Crop Tarom Paddy Khazar	Stage W.O.P. W. P. W.O.P. W. P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058	Total Cost ) 30,282 23,925 33,451 25,810	Gross Value pr 96,169 83,569 96,166 94,320	65,887 59,644 62,715 68,510
Crop Tarom Paddy Khazar Amol-3	Stage W.O.P. W. P. W.O.P. W. O.P. W. P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927 0.7802	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058	Total Cost 30,282 23,925 33,451 25,810 12,965 17,208	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974	65,887 59,644 62,715 68,510 20,523 37,766
Crop Tarom Paddy Khazar	Stage W.O.P. W. P. W.O.P. W. O.P. W. P. W.O.P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974	roject area 65,887 59,644 62,715 68,510 20,523 37,766
Crop Tarom Paddy Khazar Amol-3 Barley	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W. P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927 0.7802 0.1726	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974	roject area 65,887 59,644 62,715 68,510 20,523 37,766
Crop Tarom Paddy Khazar Amol-3	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W.O.P. W.O.P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927 0.7802 0.1726 	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295	7 0 4,697
Crop Tarom Paddy Khazar Amol-3 Barley Berseem	Stage W.O.P. W. P. W.O.P. W. O.P. W. O.P. W. O.P. W. O.P. W. O.P. W. P.	Cost/ha 199 (mil 0.7413 0.7232 0.8927 0.7802 0.8927 0.7802 0.1726 - 0.2526 0.2726	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151	7 0 4,697 38,127
Crop Tarom Paddy Khazar Amol-3 Barley	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W.O.P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52	roject area 65,887 59,644 62,715 68,510 20,523 37,766 7 0 4,697 38,127 14
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W.O.P. W.O.P. W.O.P. W.O.P. W.O.P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91	roject area 65,887 59,644 62,715 68,510 20,523 37,766 7 0 4,697 38,127 14 31
Crop Tarom Paddy Khazar Amol-3 Barley Berseem	Xtage  W.O.P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830 1.2910	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60 4,712	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91 8,623	7 0 4,697 38,127 14 31 3,911
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W.O.P. W.O.P. W.O.P. W.O.P. W.O.P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91	roject area 65,887 59,644 62,715 68,510 20,523 37,766 7 0 4,697 38,127 14 31
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean Vegetables	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. O.P. W. P. W. O.P. W. P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830 1.2910	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60 4,712 6,066	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91 8,623 14,860	7 0 4,697 38,127 14 31 3,911 8,794
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage W.O.P. W. P. W.O.P. W. O.P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830 1.2910	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60 4,712 6,066 83,112	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91 8,623 14,860 240,866	7 0 4,697 38,127 14 31 3,911 8,794 157,754
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean Vegetables Total	Stage W.O.P. W. P. W.O.P. W. P. W.O.P. W. O.P. W. P. W. O.P. W. P.	Cost/ha 199	2Cost/ha lion Rial 0.8606 0.8396 1.0364 0.9058 1.0364 0.9058 0.2004 - 0.2933 0.3165 0.2004 0.1830 1.2910	Total Cost ) 30,282 23,925 33,451 25,810 12,965 17,208 66 0 1,598 12,024 38 60 4,712 6,066	Gross Value pr 96,169 83,569 96,166 94,320 33,488 54,974 73 0 6,295 50,151 52 91 8,623 14,860	7 0 4,697 38,127 14 31 3,911 8,794

Note: Berseem yield and production are expressed in flesh-grass basis.

Table E.3.3-1(contd) Estimated Economic Crop Benefits in the Project

		Comparison				
Crop _	Stage	Crop Area			l UnitPrice	
m 75.13		(ha)	(kg/ha)	(ton)	(Rial/kg)	
Tarom Paddy		35,185		145,490	271	39,428
	₩. P.	28,494	4,437	126,428	271	34,262
Khazar	W.O.P.	32,275	5,741	185,291	265	49,102
	W. P.	28,494	6,378	181,735	265	48,160
			,,,,,		-	10,100
Amol-3	W.O.P.	12,509	7,375	92,254	258	23,801
	W. P.	18,997	7,972	151,444	258	39,073
Da 3	H O D	000	0.000			
Barley	W.O.P.	330	3,000	990	55	54
Danasan	₩. P.		3,000	0	55	0
Berseem	W.O.P.	5,450	52,500	286,125	41	11,731
D	₩. P.	37,993		2,279,580	41	93,463
Broadbean	W.O.P.	190	2,500	475	251	119
14	₩. P.	. 330	2,500		251	207
Vegetables	W.O.P.			82,125	105	8,623
-	W. P.	6,290	22,500	141,525	105	14,860
Total	₩.O.P	89,589	_			120 050
10001	w. P.	120,598		~		132,859
n	ifference		-	~	_	230,024
, D	TITCICICC	2 11 003			_	97,165
. (	(2)	Comparison	of Net In	ncome from	Crops	
Crop _		Comparison Cost/ha 199				Net Income
Crop _	Stage	Cost/ha 199 ( mi		Total Cos	t Gross	Net Income roject area
	Stage	Cost/ha 199	92Cost/ha	Total Cos	t Gross	roject area
Crop _	Stage	Cost/ha 199 ( mi	92Cost/ha llion Ria	Total Cos	t Gross Value p	roject area
Crop Tarom Paddy	Stage W.O.P. W. P.	Cost/ha 19: ( mi 0.3942 0.6259	92Cost/ha llion Ria 0.4577 0.7267	Total Cos 1) 16,103 20,706	t Gross Value p 39,428 34,262	roject area 23,325 13,556
Crop _	Stage W.O.P. W. P. W.O.P.	Cost/ha 19: ( mi 0.3942 0.6259	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551	Total Cos 1) 16,103 20,706 17,915	t Gross Value pr 39,428 34,262 49,102	roject area 23,325 13,556 31,187
Crop Tarom Paddy	Stage W.O.P. W. P.	Cost/ha 19: ( mi 0.3942 0.6259	92Cost/ha llion Ria 0.4577 0.7267	Total Cos 1) 16,103 20,706	t Gross Value p 39,428 34,262	roject area 23,325 13,556
Crop Tarom Paddy Khazar	Stage  W.O.P.  W. P.  W.O.P.  W. P.	Cost/ha 19: ( mi 0.3942 0.6259 0.4781 0.6829	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928	Total Cos 1) 16,103 20,706 17,915 22,591	t Gross Value pp 39,428 34,262 49,102 48,160	roject area 23,325 13,556 31,187 25,569
Crop Tarom Paddy	Stage   W.O.P.   W.O.P.   W.O.P.   W.O.P.   W.O.P.   W.O.P.	Cost/ha 19: ( mi 0.3942 0.6259 0.4781 0.6829 0.4781	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928	Total Cos 1 ) 16,103 20,706 17,915 22,591 6,943	t Gross Value pr 39,428 34,262 49,102 48,160 23,801	roject area 23,325 13,556 31,187 25,569 16,858
Crop Tarom Paddy Khazar	Stage  W.O.P.  W. P.  W.O.P.  W. P.	Cost/ha 19: ( mi 0.3942 0.6259 0.4781 0.6829	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928	Total Cos 1) 16,103 20,706 17,915 22,591	t Gross Value pp 39,428 34,262 49,102 48,160	roject area 23,325 13,556 31,187 25,569
Crop Tarom Paddy Khazar Amol-3	Stage   W.O.P.   W.	Cost/ha 19: ( mi 0.3942 0.6259 0.4781 0.6829 0.4781 0.6829	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928	Total Cos 1) 16,103 20,706 17,915 22,591 6,943 15,062	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073	23,325 13,556 31,187 25,569 16,858 24,011
Crop Tarom Paddy Khazar	Stage   W.O.P.   W.	Cost/ha 19: ( mi 0.3942 0.6259 0.4781 0.6829 0.4781	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928	Total Cos 1 ) 16,103 20,706 17,915 22,591 6,943 15,062	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073	23,325 13,556 31,187 25,569 16,858 24,011
Crop Tarom Paddy Khazar Amol-3 Barley	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.4781     0.6829     0.0534	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0	Total Cos 1 ) 16,103 20,706 17,915 22,591 6,943 15,062	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073	23,325 13,556 31,187 25,569 16,858 24,011
Crop Tarom Paddy Khazar Amol-3	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.4781     0.6829     0.0534     -     0.1358	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872
Crop Tarom Paddy Khazar Amol-3 Barley Berseem	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.4781     0.6829     0.0534     -     0.1358     0.2408	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841
Crop Tarom Paddy Khazar Amol-3 Barley	Stage   W.O.P.   W.	Cost/ha 19:	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.0534     -     0.1358     0.2408     0.1504     0.1364	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207	roject area 23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.0534     -     0.1358     0.2408     0.1504     0.1364     0.7228	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584 0.8392	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52 3,063	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207 8,623	roject area 23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155 5,560
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.0534     -     0.1358     0.2408     0.1504     0.1364	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207	roject area 23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean	Stage   W.O.P.   W.	Cost/ha 19:     ( mi     0.3942     0.6259     0.4781     0.6829     0.0534     -     0.1358     0.2408     0.1504     0.1364     0.7228	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584 0.8392	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52 3,063	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207 8,623	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155 5,560 10,496
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean Vegetables Total	Stage  W.O.P. W. P.  W.O.P. W. P.  W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W. P. W.O.P. W. P.	Cost/ha 19:     ( mi         0.3942         0.6259         0.4781         0.6829         0.4781         0.6829         0.0534	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584 0.8392	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52 3,063 4,364	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207 8,623 14,860 132,859	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155 5,560 10,496 87,921
Crop Tarom Paddy Khazar Amol-3 Barley Berseem Broadbean Vegetables Total	Stage   W.O.P.   W.	Cost/ha 19:     ( mi         0.3942         0.6259         0.4781         0.6829         0.4781         0.6829         0.0534	92Cost/ha 11ion Ria 0.4577 0.7267 0.5551 0.7928 0.5551 0.7928 0.0620 0 0.1577 0.2796 0.1746 0.1584 0.8392	Total Cos 16,103 20,706 17,915 22,591 6,943 15,062 20 0 859 10,622 33 52 3,063 4,364 44,937	t Gross Value pp 39,428 34,262 49,102 48,160 23,801 39,073 54 0 11,731 93,463 119 207 8,623 14,860	23,325 13,556 31,187 25,569 16,858 24,011 34 0 10,872 82,841 86 155 5,560 10,496

Table E.3.3.2 Financial/Economic Costs of the Project as Corresponded with Benefits

### A. WITHOUT MANGOL DAM BASIS (including 0 and M costs)

- 1. Financial Basis
  - 2. Economic Basis Cost/Benefit Flow Pattern Cost/Benefit Flow Pattern

	the state of the s		er i grande er	化二氯二苯甲基二甲基甲基		
YEAR	TOTAL COST	L.C.COST	BENEFIT	TOTAL COST	L.C.COST	BENEFIT
1994	10,445	. 0	. • • 0	9,292	0	0
1995	9,165	0.	0	7,760	0	0
1996	21,735	0	0	19,517	0	0
1997	36,782	9,229	0	33,885	9,091	0
1998	49,201	10,870	2,425	45,249	10,704	3,023
1999	65,473	26,614	5,291	61,968	26,254	6,596
2000	56,992	28,663	12,346	53,738	28,259	15,391
2001	56,148	31,360	19,898	53,220	30,928	24,803
2002	52,343	31,437	18,766	49,982	30,908	35,110
2003	48,276	28,505	36,433	46,247	28,041	45,415
2004	37,440	23,734	43,929	35,982	23,295	54,759
2005	19,129	12,649	50,102	19,054	12,432	62,454
2006	9,470	7,117	53,355	9,263	6,973	66,508
LATER	₹ 47,327	20,960	2,039,366	34,040	16,016	2,542,159
TOTAL	519,926	231,138	2,281,911	479,197	222,901	2,856,218

B. WITH MANGOL DAM BASIS

(including 0 and N costs)

YEAR	TOTAL COST	L.C.COST	BENEFIT	TOTAL COST	L.C.COST	BENEFIT
1994	10,469	0	0	5,009	0	0
1995	10,508	0	. 0	8,856	0	<u>0</u>
1996	23,202	0	0	20,732	. 0	$\bar{0}$
1997	39,038	9,229	0	35,784	9,091	0
1998	110,717	10,870	3,074	101,656	10,704	3,645
1999	125,450	26,614	6,666	117,157	26,254	7,846
2000	146,112	28,663	16,317	135,763	28,259	20,086
2001	145,229	31,360	27,036	135,225	30,928	33,776
2002	141,287	31,437	38,965	131,866	30,908	49,070
2003	137,141	28,505	50,888	128,065	28,041	64,365
2004	97,925	23,734	61,794	90,521	23,295	78,391
2005	78,657	12,649	71,144	73,408	12,432	90,750
2006	9,642	7,117	76,557	9,563	6,973	98,032
LATER	55,632	20,960	2,941,685	56,503	16,016	3,772,520
TOTAL	1,131,009	231,138	3,294,126	1,050,108	222,901	4,218,481

note: L.C.; Land Consolidation, as a part of TOTAL COST For With-Dam benefit, mid-summer drainage and expanded berseem acreage up to 66.3% of total rice field were included.

Tab Sub~			1 1		nefits into		unit	ha ha
	<u>ict</u>		Cropping	Cropping	Area unde Berseem	Vegetables	Broadbear	<u>Barley</u>
	WP	11,239 10,680	3,793	6,887	1,663 4,287	2,510	90	120 0
HE(I)	WOP. W P	11,594 11,019	8,964 4,127	2,630 6,892	1,575 5,599	745 1,053		210 0
	WP	8,539	3,748	4,791	1,702 3,960	743 831		0 0
HE(III	YOP W P	4,681	3,999 1,781	682 2,666	510 2,450	172 216	0	. 0
:	₩P	+	5,774 2,341			0 73	0 0	0
AW(II)	WOP W P	12,604 11,977	12,604 4,975	7,002	6,355	0 647	0	9
VE(I)	WOP W P	6,234 5,924	6,234 2,489	0 3,435	0 3,173	0 262	0	0
VE(II)	WOP W P	7,768 7,379	7,768	0 4,165	0 4,165	0 0	0	0
AE(III	WOP W P	11,088 10,534	11,088 4,904	0 5,630	4,932	0 698	0	0 0
TOTAL	WOP W P	79,969 75,985	70,349 31,372	9,620 44,613	5,450 37,993	3,650 6,290	190 330	330 0
Sub- Distr	ict.	otalPaddy	unit Tarom	: ha Khazar	<u>Amol-3</u>	Yield of	unit kg/ Yield of Khazar	ha Yield of Amol-3
HW(I)	WOP	11,239 10,680	5,318 3,877	3,548 3,876	2,373 2,927	4,135 4,437	5,741	7,375
HE(I)		11,594 11,019	5,486 4,339	3,660 4,339	2,448 2,341	4,135 4,437		
HE(II)	WOP W P	8,987 8,539	4,252 2,798	2,837 2,797	1,898 2,944		5,741 6,378	7,375 7,972
RE(III	W P		2,215 1,636	1,477 1,636	989 1,175	4,135 4,437		7,375 7,972
(1)WA	WOP W.P		2,380 2,100	2,757 2,100	638 1,286	4,135 4,437		7,375
AW(II)	WOP W P	12,603 11,977	5,194 4,188	6,017 4,189	1,392 3,600	4,135 4,437	5,741 6,378	7,375 7,972
AE(I)	WOP W P	6,233 5,924	2,569 2,163	2,976 2,164	688 1,597	4,135 4,437	5,741 6,378	7,375 7,972
AE(II)	WOP W P	7,768 7,379	3,201 2,858	3,709 2,858	858 1,663	4,135 4,437	5,741 6,378	7,375 7,972
AE(III	)WOP	11,089 10,534	4,570 4,535	5,294 4,535	1,225 1,464	4,135 4,437	5,741 6,378	7,375 7,972
TOTAL	WOP W P	79,969 75,985	35,185 28,494	32,275 28,494	12,509 18,997	4,135 4,437		7,375 7,972

PRODUCTION TARC	M VHATAD	AMOL-3	pepereu	WECES ADI EC	DOGADDEAN	DADIEV
				VEGETABLES	DKUAUDEAN	BARLEY
HW(I) WOP 21,9 W P 17,2			87,308 257,220	44,775 56,475	225 225	360 0
HE(I) WOP 22.0 W P 19.2			82,688 335,940	16,763 23,693	250 600	630 0
HE(II) WOP 17,8 W P 12,4			89,355 237,600	16,718 18,698	0	0
HE(III)WOP 9,1			26,775 147,000	3,870 4,860	0	0
AW(I) WOP 9,8 W P 9,3	341 15,828 118 13,394		0 184,320	4 TO 10 TO 1	0	0 0
AW(II) WOP 21,4 W P 18,5			0 381,300	0 14,558	0 <b>0</b>	0
AE(I) WOP 10,6 W P 9,5			0 190,380	5,895	0	0
AE(II) WOP 13,2 W P 12,6				<b>0</b> 0	0 <b>0</b>	0
AE(III)WOP 18,8 W P 20,1			0 295,920	0 15,705	0	0
TOTAL WOP 145,4 W P 126,4			286,125 2,279,580		475 825	990
					unit : mill	ion Rial
GROSSVALUE TARC	M KHAZAR	AMOL-3	BERSEEM	VEGETABLES	unit : mill BROADBEAN	ion Rial BARLEY
GROSSVALUE TARO	35 10,572	6,353	BERSEEM 1,921 5,659	<u>VEGETABLES</u> 4,701 5,930	unit : mill <u>BROADBEAN</u> 25 25	ion Rial BARLEY 27 0
HW(I) WOP 14,5	10,572 171 12,830 195 10,905	6,353 8,470 6,554	1,921	VEGETABLES 4,701	BROADBEAN 25	BARLEY 27
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5	10,572 12,830 195 10,905 126 14,363	6,353 8,470 6,554 6,774 5,081	1,921 5,659 1,819	4,701 5,930 1,760	25 25 28	27 0 47
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6	10,572 71 12,830 195 10,905 126 14,363 122 8,453 106 9,259 154 4,401	6,353 8,470 6,554 6,774 5,081 8,519 2,648	1,921 5,659 1,819 7,391 1,966	4,701 5,930 1,760 2,488 1,755	25 25 25 28 66	27 0 47 0
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6 W P 8,2 HE(III) WOP 6,0	10,572 12,830 195 10,905 126 14,363 122 8,453 106 9,259 154 4,401 198 5,415	6,353 8,470 6,554 6,774 5,081 8,519 2,648 3,400	1,921 5,659 1,819 7,391 1,966 5,227	VEGETABLES 4,701 5,930 1,760 2,488 1,755 1,963 406	25 25 28 66 0	27 0 47 0 0
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6 W P 8,2 HE(III) WOP 6,6 AW(I) WOP 6,5	10,572 12,830 195 10,905 126 14,363 122 8,453 9,259 154 4,401 98 5,415 105 8,215 6,951	6,353 8,470 6,554 6,774 5,081 8,519 2,648 3,400 1,708 3,721	1,921 5,659 1,819 7,391 1,966 5,227 589 3,234	VEGETABLES  4,701 5,930 1,760 2,488 1,755 1,963 406 510	25 25 28 66 0 0	27 0 47 0 0 0
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6 W P 8,2 HE(III) WOP 6,6 W P 4,7 AW(I) WOP 6,5 AW(II) WOP 14,1	10,572 12,830 195 10,905 126 14,363 122 8,453 106 9,259 154 4,401 5,415 1605 8,215 6,951 17,928 13,866 122 8,867	6,353 8,470 6,554 6,774 5,081 8,519 2,648 3,400 1,708 3,721 3,727 10,418	1,921 5,659 1,819 7,391 1,966 5,227 589 3,234 0 4,055	VEGETABLES  4,701 5,930 1,760 2,488 1,755 1,963 406 510 0 172	25 25 28 66 0 0	27 0 47 0 0 0 0
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6 W P 8,2 HE(III) WOP 6,5 W P 6,1 AW(II) WOP 6,5 AW(II) WOP 12,2 AE(I) WOP 7,6	10,572 12,830 195 10,905 14,363 122 8,453 106 9,259 154 4,401 5,415 105 8,215 6,951 17,928 13,866 122 8,867 144 7,163	6,353 8,470 6,554 6,774 5,081 8,519 2,648 3,400 1,708 3,721 3,727 10,418 1,842 4,621 2,297	1,921 5,659 1,819 7,391 1,966 5,227 589 3,234 0 4,055	VEGETABLES  4,701 5,930 1,760 2,488 1,755 1,963 406 510 0 172 0 1,529	25 25 28 66 0 0 0 0	27 0 47 0 0 0 0 0
HW(I) WOP 14,5 W P 11,3 HE(I) WOP 14,5 W P 12,7 HE(II) WOP 11,6 W P 8,2 HE(III) WOP 6,6 W P 4,7 AW(I) WOP 6,5 AW(II) WOP 12,2 AE(I) WOP 7,6 W P 6,3 AE(II) WOP 8,3	10,572 12,830 195 10,905 14,363 122 8,453 106 9,259 154 4.401 5,415 1605 8,215 1696 17,928 13,866 122 8,867 7,163 149 11,051 9,461 191 15,774	6,353 8,470 6,554 6,774 5,081 8,519 2,648 3,400 1,708 3,721 3,727 10,418 1,842 4,621 2,297 4,812 3,279	1,921 5,659 1,819 7,391 1,966 5,227 589 3,234 0 4,055 0 8,389	VEGETABLES  4,701 5,930 1,760 2,488 1,755 1,963 406 510 0 172 0 1,529 619 0	25 25 28 66 0 0 0 0 0 0	27 0 47 0 0 0 0 0 0

NTIM HITITIA MA		1			unit : mill	
NET VALUE TA	ROM <u>KHAZAR</u>	AMOL-3	BERSEEM		BROADBEAN	<u>Total N B</u>
HUCTY NOD .					and BARLEY	
	0,958 6,894		1,433	2,132	9	24,321
W P 7	8,930	5,604	4,302	3,509	8	30,231
HRIATA HOD TO						5,911
	7,112	4,016	1,357	798	12	23,569
W P 8	3,816 9,997	4,482	5,619	1,472	22	30,409
110 ( T T ) 110 D						6,840
	,962 5,513	3,114	1.467	796	. 0	18,852
W P 5	6,685 6,444	5,637	3,974	1,162	0	22,902
						4,050
	1,148 2,870	1,623	440	184	0	9,264
W P 3	3,769	2,250	2,459	302	0	12,104
						2,839
	1,457 5,357	1,047	0	0	0	10,861
.WP 4	1,267 4,838	2,462	3,083	102	0	14,752
				•		3,892
AW(II) WOP 9	7,726 11,692	2,284	Ű .	. 0	. 0	23,702
.W.P. 8	3,510 9,651	6,893	6,377	905	0	32,335
						8,633
AE(I) WOP 4	1,811 5,783	1,129	0	0	0	11,722
¥ P 4	4,986	3,058	3,184	366	0	15,989
	•	• .				4,267
AE(II) WOP 5	7,207	1,408	0	0	0	14,609
W · P 5	6,585	3,184	4,180	0	0	19,755
*.		÷	·			5,146
AE(III)WOP 8	3,558 10,287	2,010	0	0	0	20,855
W P: 9	0,215 10,448	2,803	4,949	976	0	28,391
		-	•		_	7,537
TOTAL WOP 65	62,715	20,523	4,697	3,911	2 1	157,754
W P 57	7,896 65,647	36,373	38,127	8,794	31	206,868
			,	·, · • ·		200,000

Table E.3.3-3 (2) Breakdown of Economic Benefit into Subdistricts unless otherwise specified, unit in million Rial

GROSSY	ALUE	TAROM	KHAZAR	AMOL-3	BERSEEM	VEGETABLES	BROADBEAN	BARLEY
HW(I)	WOP W P	5,959 4,662	5,398 6,551	4,515 6,020	3,580 10,546	4,701 5,930	56 56	20 0
HE(I)	WOP W P	6,148 5,217	5,568 7,334	4,658 4,815		1,760 2,488	63 151	35 0
HE(II)	WOP W P	4,765	4,316	3,611 6,055	3,664 9,742	1,755 1,963	0	0
HE(III	)WOP W P	2,482 1,967	2,247	1,882 2,417	1,098 6,027		0 0	0 -
AW(I)	WOP W P	2,667	4,194 3,549	1,214 2,645	0 7,557	0 172	0 0	0
AW(II)	WOP W P	5,820 5,036	9,154 7,080	2,649 7,404	0 15,633	0 1,529	0 0	0
AE(1)	WOP W P	2,879 2,601	4,528	1,309 3,285	0 7,806	0 619	0 0	0
AE(II)	WOP W P	3,587 3,437	5,643 4,831	1,633 3,420	0 10,246	0 0	0 0	0 0
AE(III	90W( W P	5,121 5,453	8,054 7,665	2,331 3,011	0 12,133	0 1,649	0 0	9 0
TOTAL	WOP W P	39,428 34,262	49,102 48,160	23,801 39.073	11,731 93.463		119 207	54 n

			and the second before				
<u>NET VALUE</u>	<u>TotalGROSS</u>	Total	Total Crop.	Net Margin	Net	Total Acr-	Net per
	BENEFITS	Costs/ha	Prod COSTS	Ratio % _	RENEETES	0240/4022	ha DUNDETT
		200 107 114	1100.00010	racio s	DEUTITIO	case/year	Ha DENEFIL
		12 4 2 . 12					and the second
HW(I) WOP	24,230	0.508	7,677	68.3%	16.552	15,102	1.096
₩ P	33,765	0.636	11,170	66.9%	22,599	17,567	1.286
	00,.00		11,110	00.3%			1.200
118222 1100		4.8	and the second	er and the second	6,046	and the second	The second second
HË(I) WOP	21,621	0.479	6,807	68.5%	14,814 22,993	14,224	1.042
₩ P	33,778	0.602		68.1%	22.002	17,911	
" ~	00,110	0.002	10,700		22,555	17,311	1.284
	24.7	100	the state of the s		8,178	and the second	
HE(II) WOP	18,111	0.478	5,468	69.8%	12,644	11,432	1.106
. W P	25,852	0.621	8,272		17,583	13,330	
	,	0.001	0,275			19.000	1.319
					4,939		The second second
HE(III)WOP	8,115	0.486	2,608	67.9%	5,507	5,363	1.027
W P		0.598	4,254	68.9%	9,435		
	10,000	0.000	7,201				1.320
				1.1	3,928		
AW(I) WOP	8,075	0.515	2,974	63.2%	5,101	5,775	0.883
. W.P.		0.594	5,123		11,329		
" "	10,110	0.001	3,143	00.0%		8,631	1.313
//					6,228	. 1	
AW(II) WOP	17,623	0.515	6,491	63.2%	11,132	12,603	0.883
. W P		0.603	11,450		25 224	10 070	
	00,002	0.003	11,430	00.0%	20,234	18,979	1.330
4-4-5					14,102		
ÁE(I) WOP	8,715	0.515	3,210	63.2%	5,505	6,233	0.883
· W P	17,968	0.601	5,625		12,345	9,359	1 210
** *	. 11,000	0.001	3,020	00.1%	14,545	9,339	1.319
					6,840		
AE(II) WOP	10,862	0.515	4,001	63.2%	6,862	7.768	0.883
- W P		0.592	6,829	68.9%		11,544	
. " <b>.</b>	41,000	0.002	,0,020	00.3%			1.309
	*			REPORT OF THE PARTY	8,246		
AE(III)WOP	15,506	0.515	5,711	63.2%	9,795	11,089	0.883
W P	29,911	0.614	9,920	66.8%		16,164	
" 1	20,011	0.014	0,040	00.04		10,104	1.237
2.2				the second second	10,199		
TOTAL WOP	132,859		44,947	:	87,912	89,589	0.981
`W `P	230,024		73,431	1.00	156,619	120,598	
	/WOD WD		. 10,401	* +		120,000	1.299
prinerence	(WOP - WP)	,			68,707		the state of the state of
	TotalGross	Total Cos	t Total Cre	op Net Mar	gin Net	Rev Nat	Net/ha
	BENEFITS		Doodus	See Hot Hall	φ±α αυδί • • • • • • • • • • • • • • • • • • •	TEA HET	net/Ha.
		per ha	rroduc. (	Cost Ratio			
HW(I)	9,536	0.127	3,493	-0.014	6,046	6,048	0.566
HE(I)	12,156	0.124	3,981	-0.005	8,178	8,180	0.742
HE(II)		0.142					
			2,805	-0.018	4,939	4,940	0.579
HE(III)	5,571	0.112	1,646	0.011	3,928	3,929	0.883
AW(I)	8,374	0.078	2,148	0.057	6,228	6,230	1.136
AW(II)	19,059	0.088		0.050		14 100	
			4,959	0.056	14,102	14,106	1.178
AE(I)	9,252	0.086	2,415	0.055	6,840	6,842	1.155
AE(II)	11,071	0.077	2,828	0.057	8,246	8 248	1.118
AE(III)	14,405	0.099	4,208				
un(111)	14,400	0.099	4,200	0.037	10,199	10,202	0.968
TOTAL	97,165		28,484		68,707	68,725	
	,		20,101		00,101	00,120	

ject Y YAROM	'ielde				
'AROM	TOTAL				
	KHAZAR	VMOT-3	TAROM	& AMOL-3	KHAZAR
1,800		8,100		-3.5	-
1,100	·	7,900		-2.5	
1,450	2,200	7,050		-1.5	-2.5
1,440	4,230	5,510		-0.5	-1.5
1,968	5,391	7,898		0.5	-0.5
1,106	5,512	8,144		1.5	0.5
i,030	5,700	6,590		2.5	1.5
3,500	4,500	8,100	TOTAL OF	3.5	2.5
1,299	4,594	7,412	SQUARE	42	18
5,445	33,468	-1,977	TARON Y=	-47	(X-1988.5)+4299
1,541	22,571	8,031	KHAZAR Y=	459	(X-1989.5)+4594
1,430	60,990	-440	AMOL-3 Y=	-10	(X-1988.5)+7412
E	ESTIMATED	YIELD IN	1992	TAIOM	4,135
	· · · · · · · · · · · · · · · · · · ·			KHAZAR	5,741
				AMOL-3	7,375
		1,450 2,200 3,440 4,230 1,968 5,391 1,106 5,542 5,030 5,700 3,500 4,500 1,299 4,594 5,445 33,468 1,541 22,571 1,430 60,990 ESTIMATED	1,450 2,200 7,050 1,460 4,230 5,510 1,968 5,391 7,898 1,106 5,542 8,144 5,030 5,700 6,590 1,299 4,594 7,412 5,445 33,468 -1,977 1,541 22,571 8,031 1,430 60,990 -440  ESTINATED YIELD IN	1,450 2,200 7,050 3,440 4,230 5,510 1,968 5,391 7,898 1,106 5,542 8,144 5,030 5,700 6,590 3,500 4,500 8,100 TOTAL OF 1,299 4,594 7,412 SQUARE 5,445 33,468 -1,977 TAROM Y= 4,541 22,571 8,031 KHAZAR Y= 1,430 60,990 -440 AMOL-3 Y= ESTIMATED YIELD IN 1992	1,450 2,200 7,050 -1.5 1,460 4,230 5,510 -0.5 1,968 5,391 7,898 0.5 1,106 5,542 8,144 1.5 5,030 5,700 6,590 2.5 3,500 4,500 8,100 TOTAL OF 3.5 1,299 4,594 7,412 SQUARE 42 5,445 33,468 -1,977 TAROM Y= -47 1,541 22,571 8,031 KHAZAR Y= 459 1,430 60,990 -440 AMOL-3 Y= -10  ESTIMATED YIELD IN 1992 TAROM KHAZAR

Crop and	Optimum	Optimum	Preventing	; Without-D	am Basis I	Mid-summer	With-Dam
Maturity	Density	Seedling	Input loss	Increment	t Rate	Drying etc	Basis
	%	%	%	% ¥	V.P. Yield	%	W.P. Yield
earlyTAROM	2.3	2.4	2.6	7.3	4,436	5.6	4,668
med.KHAZAR	4.5	2.8	3.8	11.1	6,378	5.6	6,700
lateAMOL-3	4.5	0.8	2.8	8.1	7,972	5.6	8,385
	£		•				
BERSEEM	14.3	(Improved	Drainage)	52.5*1.163	60,000	52.5*1.163	60,000

Note: rates of yield increment are based on the data by SARI station, as given in Appendix C. Table C.2-5, Table C.2-6 and Table C.2-7.

m 1 3	D 0 0 "	T1 *	ff l ) 1	T)	T. 1.	r )
Tanto	E.3.3-5	หวกลกกาล เ	Household	h a rm	KUMPAT	Kalance
Iduic	11.0.0	LINGICIAL	HOUSCHOIG	E CLE III	DUUNCE	Datance

	dore bre	J. 0 0 1 11	imiciai no	uschola i	arm baabet		ha / farm
Item With/	Without	type A1 tyr	ne Å2 tv	me R1 :	tvne R2 t		type C2
	creage h		1.00	2.50	$\frac{2.50}{2.50}$	5.00	5.00
Cropping In			1.00	2.00	2.00	5.00	5.00
or obbang in	W.O.P.	143%	130%	124%	117%	110%	107%
	₩. P.	175%	167%	158%	150%	150%	
DaddyTanan	₩.O.P.	0.00					and the second second
PaddyTarom			1.00	1.50	1.00	2.00	2.00
Wh	₩. P. ₩.O.P.	0.00	0.50	1.00	0.50	1.50	1.50
Khazar		1.00	0.00	1.00	1.00	2.00	1.50
	W. P.	1.00	0.00	1.00	1.00	2.00	1.50
Amol-3	W.O.P.	0.00	0.00	0.00	0.50	1.00	1.50
	W. P.	0.00	0.50	0.50	1.00	1.50	2.00
Berseem	W.O.P.	0.33	0.20	0.50	0.33	0.50	0.33
	W. P.	0.58	0.50	1.25	1.00	2.50	1.67
Vegetables	W.O.P.	0.10	0.10	0.10	0.10	0.00	0.00
•	W. P.	0.17	0.17	0.20	0.25	0.00	0.00
Gross Incom		(1000 Rial)					
PaddyTarom	W.O.P.	. 0	2733	4100	2733	5466	5466
	W. P.	0	1543	3086	1543	4628	4628
Khazar	₩.O.P.	2980	. 0	2980	2980	5959	4469
	W. P.	3477	0	3477	3477	6955	5216
Amol-3	W.O.P.	0	0	0	1339	2677	4016
	W. P.	0	1522	1522	3044	4566	6088
Berseem	W.O.P.	381	231	578	381	578	381
	W. P.	592	660	1650	1320	3300	2204
Vegetables	W.O.P.	236	236	236	236	0000	0
1000000100	W. P.	402	402	473	591	0.	Ö
Net Income/		(1000 Rial)	402	. 410	301	. 0	Ú.
PaddyTaron		0	1774	2862	1908	4264	4264
Laddy Lat Gill	W. P.	0	1055	2246		3712	3712
Vhogon							
Khazar	₩.O.P.	1776	0	1943	1943	4452	3339
1	₩. P.	2427	0	2573	2573	5633	4225
Amol-3	W.O.P.	0	0	1000	821	1922	2883
D	W. P.	0	995	1068	2137	3575	4767
Berseem	W.O.P.	284	172	431	284	431	284
	W. P.	450	502	1254	1003	2508	1675
Vegetables	₩.O.P.	107	107	107	107	.0	
	W. P.	238	238	280	350	0	0
						+ ,+	
Total Farm	W.O.P.	2167	2053	5342	5063	11068	10770
Income	W. P.	3115	2790	7422	7186	15428	14379
Off-farm	W.O.P.	815	832	476	672	0	238
Income	W. P.	978	998	571	806	0	0
Household	W.O.P.	2982	2885	5818	5735	11068	11008
Income	W. P.	4093	3788	7993	7992	15428	14379
Difference	WP/WOP %	137.2%	131.3%	137.4%	139.4%	139.4%	130.6%
	WP - WOP	1110	902	2174	2257	4360	3371
Living Expe		2710	2710	4134	4134	8406	8406
22 - 2110 Zing 0	inse/year	2170					
Annual	W.O.P.	77	-408	46		2034	2034
		77		46 3859	532	2034 7022	2034 5973
Annual Surplus	W.O.P. W. P.	77 1383	1078	3859	532 3858	7022	5973
Annua l	W.O.P. W. P. idation	77 1383 361			532		

Breakdown of Production-Cost/Benefit by Project Component Table E.3.4-1 unit: % of Project Financial Benefit A) WITHOUT-DAM BASIS TOTAL IRRIGATION DRAINAGE(of which) O.F.L.C.(of which) **CROP FACTOR** (labor saving) (labor saving) 12.3% 22.1% 3.9% RICE -BENEFIT 16.3% 3.0% (2.4%)-0.5%(10.5%)5.5% COST 3.0% (12.9%)59.5% 8.5% 51.0% BERSEEM BENEFIT -1.0% (1.0%)-13.0% (2.1%)-14.0% COST (3.1%)4.2% 4.1% 8.3% VEGETABLE BENEFIT 0.5% (0.4%)-1.8% -2.3%(0.3%)COST (0.7%)0.1% OTHERS BENEFIT 0.1% 0.0% COST 110.2% 34.9% 59.0% 16.3% TOTAL BENEFIT -10.2%-13.0% -0.2%COST 3.0% 100.0% 46.0% (13.0%) (3.7%)TOTAL 19.3% 34.7% (16.7%)B) WITH-MANGOL DAM BASIS CROP.FCTR IRRIGATION(of which) DRAINAGE(of which) O.F.L.C.(of which) TOTAL (labor saving) (labor saving) (labor saving) 18.8% 3.3% 38.2% 16.1% RICE BFT. 17.4% 15.3% (5.2%)2.6% (1.4%) -0.4%(6.3%)COST (12.9%)43.4% 50.6% 7.2% BER- BFT'. (0.7%)-11.1% (1.4%)-11.9%-0.9%SEEM COST (3.1%)7.1% 3.6% 3.5% VEGE- BFT. (0.3%)0.4% (0.4%)-1.5%-2.0% TABLE COST (0.7%)0.1% 0.1% 0.0% OTHERS BFT 0.0% 0.0% 0.0% COST 95.9% 50.2% 29.7% TOTAL 16.1% (8.0%)4.1% (2.3%)-11.1% (5.2%)-0.2% 15.3% 100.0% 39.1% 29.5% 31.4%

Note: strictly speaking, benefits and costs for each crop can hardly be disintegrated into components. The above shown estimation is based on so many assumptive conditions. Major ones are: financial basis only, with Mangol dam otherwise effect of irrigation becomes negligible, positive cost derived from either labor saving or scale merit by employing larger size machinery, effect of irrigation attributable to mid-summer drainage effect of rice because once water is drained from paddy lots, recharging from water source is necessary. The effect of labor saving account for ca. 17%, but it is masked by by heavy expense of machinery and other input costs, leading to overall negative figures of costs, which are actually summed up to -27%.

O. F. L. C.: on farm land consolidation where to allocate changes

· ·			
BENEFIT			WITHOUT-DAM BASIS,
WITHOUT PROJECT LEVEL PRODUCTION	Y X dS	CURRENT YIELD	YdS/2 each for Drainage and Land Consolidation. YdS from mid-summer drainage only for the Irrigation effect,
-S X dY S X dY	-dS X dY dS X dY	Y.DROP YIELD	yield loss prevention to Irrig. Sdy only to Land Consolidation
		GAIN	dSdY/2 to Drainage and Land C.
CURRENT CROP AREA	EXPANDED OR SHRINKED		-SdY and -dSdY indicate loss from ullage or area decrease attributed to Land Consoli- dation
	WITHOUT PROJECT LEVEL PRODUCTION -S X dY S X dY	WITHOUT PROJECT LEVEL PRODUCTION  -S X dY -dS X dY S X dY dS X dY  CURRENT CROP AREA EXPANDED OR	WITHOUT PROJECT LEVEL PRODUCTION Y X dS CURRENT YIELD  -S X dY -dS X dY Y.DROP S X dY dS X dY YIELD GAIN  CURRENT CROP AREA EXPANDED OR

COST		
WITHOUT PROJECT	C X dS	WITH-DAM BASIS, CURRENT in addition to the above
LEVEL PRODUCTION	30 V 30	COST allocation, mid-summer drainag
−S X dC	-dC X dS	C O S T and yield loss prevention, SAVING estimated from the minimum
S X dC	dC X dS	INCREASEDyield and negative regression
		COST in the long trends of paddy
	1	yields for early and late
CURRENT CROP AREA	EXPANDED	
•	OR	estimated from the minimum
	SHRINKED	necessary for winter crops.

cost saving includes saving by scale merit from larger-sized machinery and by ullage of paddy acreage from Land Consolidation, allocatable to it. SdC/3 allocated to Drainage, Land Consolidation and Irrigation, while dCdS is allocated only to Land Consolidation.

The result of calculation is summerized in the above Tables, where the percentage based on the common denominator, or financial project benefit WITH- or WITHOUT DAM. Of course, the benefits from these two cases are different, and WITH-DAM basis includes mid-summer drainage and potential drought-loss preventive effects in the level of yields of paddy.

Table E.3.4.2 (1) Mechanization Benefit Calculated From Cost-Benefit Comparison Between Without and With-Project (Financial Basis Only)

Item Without-Project 1. Transpla	With Project	Difference
System Field nursery - Manual Planting	Box Nursery – Transplanter	mechanized
BENEFITS.	Taron Khazar Agol-3	
control seedling number 0	88.3 134.1 120.5	+322.9
control optimum density 0	85.8 71,5 21.4	+158.5
timely transplanting 0 COSTS	35.5 58.8 37.5	+129.6
nursery labor $7.5 \times 5.3 = 39.7$	$6.7 \times 5.3 \approx 35.5$	+ 4.2
plant' labor 13.8 x 7.6 =103.3	0	+103.3
operator cost(1000Rial) 0	$1.7 \times 4.1 = 7.0$	- 7.0
depreciation of box-nursery 0	3.175/7.5ha (0.6years)	- 97.1
depreciation of transplanter 0	11,231/50ha (5.0years)	- 57.0
fuel for box nursery 0	0.9/ha	- 0.9
fuel for transplanter 0	0.2/ha	- 0.2
maintenance for box nursery 0	10.2/ha	- 10.2
maintenance for transplanter 0	6.2/ha	- 8.2
Total Benefit per ha BY USE OF TRANSPLA	NTER	<u>+538.8</u>
2. <u>Harvesti</u>	n <b>g</b>	
System Manual Reaping -	Auto-Threshing-	mechanized
Seall-thresher	Combine-Harvester	mecitorityen
BENEFITS	nompile lift tearer	
earlier berseem sowing 0	52.5t/ha x 7% x 22Rial/t =	+ 80.9
lessening grain loss 0	5,547kg/ha x 1% x 533Rial/t =	
COSTS	,	
cutting labor 13.4 x 8.6 = 115.5	2.5times x 8.5ths = 21.5	+ 94.0
collectinglabor 5 x 8.8 = 43.9	1.0 $\times 8.8$ thsR = 8.8	+ 35.1
threshing labor $5 \times 8.2 = 40.9$	1.5 $\times 8.2$ thsR = 12.3	+ 28.8
operator cost(1000R/hr) 0	$1.7 \times 3.4 \text{thsR} = 5.8$	- 5.8
depreciation 350/2ha=175/ha	44,039/50ha = 880.8/ha	
of thresher 175(5years) 44.5	880.8(6.1years) = 201.0	-156.3
	0.40/ha	-0.2
maintenance 1.5/ha	5.1/ha	- 4.1
Total Benefit per ha BY USE OF AUTO-COM	BINE	+101.8
	/ MAR	INUED )
	( 00111	**************************************

Table E.3.4.2 (1) Mechanization Benefit Calculated From
Cost-Benefit Comparison Between Without
and With-Project (Financial Basis Only) (CONT'D)

<u>Item</u>	Without-Projec	<u>t</u>	<u>With-Project</u>	
		3. <u>Culti</u>	vating	
System	power tiller a manual tillage		big-size tractor with attachment	more mechanized
BENEFIT	S			
earlier	berseem sowing	0	$52.5t/ha \times 0.022 = 28.9$	+ 28.9
	or rice			· 1000年
plowing	labor 4.5 x 4.1	= 18.5	0	+ 18.5
	labor 3.2 x 6.7		0	+ 21.4
	g lab. 1.0 x 5.8	7	0	+ 5.8
	lab. 11.1 x 6.4		$5.6 \times 6.4 = 35.8$	+ 35.4
	g lab. 1.3 x 5.8		$1.3 \times 5.8 = 7.5$	0
	ion 7.4 x 4.6	•	$7.4 \times 4.6 = 34.4$	0
canal a	lign. 2.4 x 4.8	= 11.6	0	+ 11.6
	or berseem			
sowing	labor 0.8 x 4.5	= 3.6	0	+ 3.6
_	labor 6.3 x 4.1		0	+ 25.8
	or both crops			
operato	-	0	$1.7 \times (8.4+1.3) = 16.5$	- 16.5
deprecia	ation 3,200/5ha		49,480/50ha = 990/ha	
	rtiller(5years)	154.2	(5.8years)	- 84.3
	ry fuel 0.5/ha	0.5	3.3/ha	- 2.8
	ance 0.8/ha	0.8	5.1/ha	- 4.3
				e region.

Summary of Estimated Financial Benefits from Rice-Berseem Production System

+ 37.3

TOTAL BENEFIT per ha By Large-Sized Tractor

Number of Machinery Sets Covering 50ha/set; 37,993/50 = 760 sets per year Benefit from Transplanters; 0.539/ha x 37,993 = 20,478 m. Rial per year Benefit from A.T.Combines; 0.1018/ha x 37,993 = 3,868 m. Rial per year Benefit from Big Tractors; 0.0373/ha x 37,993 = 1,417 m. Rial Total 760 sets for 37,993 ha will bring the total Benefits 25,763 m. Rial equivalent to 46.7 % of the total financial benefit of the project. This share, 46.7 % will be derived from a half of the total area, where berseem id expected to cover, though this value includes both crop and productivity components.

note: Direct comparison of machinery benefits by major field practice would not be meaningful because a timely use of machinery gives not only yield impact or labor saving, but making other field practices easier or even aftermath effect on the following grown crops could be expected. However, the above comparison provides a rough basis why such a machinery system should be replaced for present small size system.

# Table E.3.4-2 (2) Mechanization Benefits on Crop Productivity

#### 1. CALCULATION OF ACREAGE COVERED BY A SET OF MACHINERY

MACHINERY SIZE/WIDTH PEAK PERI~ ANNUAL, FIELD WORK SPEED OF MAX.COVER~ NUM	TD .
OD OF WORK O.P. DAYS EFFICIENCY OPERATION AGE (ha) OF SET	
TRANSPLANTER 8rows Apr 21 -	
2.4 June 9 45 0.58 0.55 99.2 0	02
PADDY COMBINE 5rows Aug 11 -	
1.7 Sept 25 41 0.65 0.74 96.6 0	02
PADDY TRACTOR 65 HP Apr 6 -	
2.4 June 6 52 0.70 0.65 163.5 0	01
NURSERY SET 1200box Mar 30 - 21 x 1.5times/year, 11.5 mandays/1200boxes	
May 19 32 days 1.00 0	15
note: plot size averages at 0.4ha, operating hours per day 8 hours, field	
efficiency adjusted by field size, workable days during period of	
field operationis set at 0.85 -0.9, puddling forms peak period of	
operation for tractor sets. Sets of machinery to be equipped per 10	ha
is determined as double the maximum coverage for user's convenience	

## 2. ESTIMATED DEPRECIATION OF MACHINERY ABOVE LISTED (in 1000 Rial, ton/set)

MACHINERY	ATTACHMENT	VALUE OF	A VALUE OF	В	WEIGHT	FREIGHT INLA	ND TRANS-	FINAL
A	В				A + B	A + B PORT	COST A+B	VALUE
T.PLANTER	parts 15%	9,550	1,433		0.65	179	70	11,232
COMBINE	d.o.	35,140	5,587		3.16	869	338	41,934
TRACTOR	attachment	19,100	22,406		4.15	1,141	444	43,091
NURSERY	local box	2,261	226		1.80	405	193	3,085

# 3. ESTIMATED FINANCIAL DEPRECIATION COST PER HA (1000 Rial, ha)

MACHINERY	VALUE/SET	ha/MACHINE	VALUE/ha	HOURS/YEAR	LIFE(hrs)	DEPRECIATION/ha (hr)
T.PLANTER	11,232	0.02	224.6	360	2,700	38.1 (7.93)
COMBINE	41,934	0.02	838.7	328	3,000	138.0 (33.2)
TRACTOR	43,091	0.01	430.9	416	3,600	69.1 (28.6)
NURSERY	3,085	0.15	462.8	768	7,560	70.7 (1.05)
TOTAL MACH	IINERY					315.9 (70.8)

## 4. ESTIMATED ECONOMIC COST FOR MACHINERY OF PADDY CROPPING (1000 Rial/machinery)

MACHINERY	FOREIGN.C.	DOMESTIC	CONVERTED	ANNUAL	ECONOMIC !	MAINTENENC	E TOTAL
	PORTION	C. PORTION	ECON. VALUE	<b>FUELCOST</b>	FUEL COST	COST/YEAR	ECON. COST
T.PLANTER	11,232	0	11,232	6.85	48	842	12,122
COMBINE	41,934	- 0	41,934	20.40	143	3,145	45,222
TRACTOR	32,318	10,773	40,366	164.40	1,151	3,027	44,544
NURSERY	1,851	1,234	2,773	6.75	47	208	3,028
TOTAL		1.1	•	198.40	1,389	7,223	104,916

Table	E.3.4-2	* -	Mechanization	Benefits	(Contd.)	)

5. WITH-PROJECT MAC	HINERY COST	PER ha PE	R year (	( 1000 Ria	ıl)	
MICHINARI PROMINING				The second		(contd.)
MACHINERY ECONOMIC	AREA COVE-	ECON. COST	DEPRECIA-			
T.PLANTER 12,122	KAGE/SET 50	PEK na 242.4	TION/y/ha	WSI/y/ha	COST/y/ha	
COMBINE 45,222	50 50	4.44.4 004.4	ათ. 1 120 ი	6.85	2.9	47.8
TRACTOR 44,544	100	445.4	138.0 69.1 70.7	164.40	$\begin{array}{c} 10.4 \\ 5.2 \end{array}$	$168.8 \\ 238.7$
NURSERY 3,028	7 5	403.7	70.7	6.75	5.3	
TOTAL MACHINERY	1.0	1.996.1	315.9	198.40	23.7	538.0
6. ESTIMATED WITH-P	*		2.4			
o. Polithyten altu-la	TOTEGE LABO	ik (USI PEI	t na PER yea	ar ( 1000	( kiai	Rial )
MANUAL LABOR	MACHINERY	NURSERY	WEEDING/	IRRIGATION	I POST-HAR-	TOTAL
COMPONENT/ha	OPERATION	CARING	REPLANTING		VEST LABOR	LABOR/ha
man-day/ha	1.2	6.7		4.9	2.5	20.9
LABUK WAGE/manday	14.4	5.5	6.5	4.6	9.0	40.0
FINANCIAL COST / ha conversion factor	17.3	36.9	36.4	22.5 0.376	22.5	
CONVERSION TACKOR	U.90b	U.376	U.376	0.376	0.376	0.406
ECONOMIC COST / ha	13.1	13.9	13.7	8.5	0.376 8.5	60.1
7. ESTIMATED WITH-P	ROJECT OTHE	R INPUT CO	OST PER hall	PER year		1)
KIND OF INPUT	PANDYSEED	rertiki 286	CHEMICALS	WATER FEE	novincvir	nubtotal
	Amol -3	urea			heat drier	
QUANTITY/ha/year/kg	30	350	15	12000cu m	1	
QUANTITY/ha/year/kg UNIT INPUT COST/kg	0.805	0.019	1.600	0.003	10.168	
FINANCIAL COST / ha	24 15	6 65	24.00	30.00	10.17	94.968
conversion factor	0.906	0.981	1.000	0.482	0.774	0 11000
ECONOMIC COST / ha	21.880	6.524	1.000 24.000	14.460	7.870	74.734
W. TOD YARDIM MALE						TOTAL
MAJOR INPUT NAME	benlate	D.A.P.	diazinon d	trying lab	er fuel	INPUT COST
QUANTITY/ha/year UNIT INPUT COST / kg	0.5	100	12 ( 0.325	).5manday	12	* 1
		0.025	0.325	8.500	0.015	400.000
FINANCIAL COST / ha conversion factor	0.825 1.000	2.500		4.250		106.623
ECONOMIC COST / ha	0.825	2 453	$\frac{1.000}{3.900}$	1.598	7.000 $1.260$	84.769
Economic Cool / na	0.023	2.400	3.300	1.390	1.200	04.709
8. PROPOSED WITH-PRO	OJECT PRODU	ICTION COST	PER ha PEI	R year (	1000 Rial	)
COST-PRICE BASIS	MACHINERY	MAN' LAROR	OTHER INPUT	ין	TOTAL COST	ner cent
FINANCIAL PRICE	538.0	135.6	106.6	•	780.2	her cent
ECONOMIC PRICE		60.1	84.8		682.9	87.5
						J

#### Table E.3.4-2 (2) Mechanization Benefits (Contd.)

# 9. PLANNED MAJOR MACHINERY OPERATION COVERING 100 ha / 2 SETS OF MACHINERY

				unit: *	hrs/ha	+ days/yea	ar
Crop	paddy	paddy	paddy	paddy	paddy	berseem	berseem
Operation				top-dress	ing		collecting
Operation	plowing	puddling	planting	spraying	harvesting	plowing	mowing
Machinery	tractor	d. o. trai	nsplanter	tractor	ATcombine a	tractor	tractor
Period in	Mar.10	Apr.10	Apr.20	Jun.15	Aug. 1	Sept.1	Jan. 15
Period out	Apr. 15	May 20	May 31	Jul.31	Sept20	Oct.20	Mar.31
Fine Days+	33.0	37.0	38.0	43.0	46.0	32.0	51.0
Speed(A) *	3.1	3.2	3.0	2.6	3.4	1.8	3.6
F.E. (B)	0.70	0.70	0.70	0.65	0.70	0.70	0.65
₩.R. (AB)*	4.43	4.57	4.29	4.00	4.86	2.57	5.54
Days/year	27.7	28.6	26.8	25.0	30.4	16.1	34.6
% FineDays	83.9	77.2	70.5	58.1	66.0	50.2	67.9

note: Speed; operation speed of machinery. F.E.; field efficiency W.R.; effectiveworking rate, Days/year; days required to cover 50 ha by a set of machinery, % Finedays; rate of operation on fine days, unit of puddling counted twice, also spraying counted twice =  $1.3 \times 2$ , while grass cutting counted as 3 times =  $1.2 \times 3$ .

Annual Working Hours and Depreciation per ha by Machinery Calculated from the above shown system of joint use

	nnual Operation ays Covering 50ha	Total hrs per year	Total hrs per ha		1000 Rial Depreciation Cost/ha/year	Life years
TRACTOR	131.9	1055.2	21.1	3,600	293.4	3.4
T.PLANTER	26.8	214.4	4.3	2,700	60.5	12.6
AT COMBINE	28.3	226.4	4.5	3,000	214.8	13.3

note: T.PLANTER; transplaner, out of the cost for tractor, 73.8% account for the share for paddy, and 26.2% that on berseem. AT; Auto-Threshing

Financial Costs of Machinery Use by the System of 2 sets/100ha as Shown Above

Machinery Annual Cost in 1000 Rial/50ha Total Cost Crop Income/ha/year Rate of Fuel etc. Operator Spareparts /ha/year\* Paddy + Berseem MachinCost

TRACTOR	896.9	1118.5	1455.3	362.8			
T. PLANTER	27.9	227.3	133.7	68.3	3222.0	1320.0	14.6%
AT COMBINE	113.2	240.0	496.7	231.8			

note: \* including depreciation, 152.9 2130.0 256.0 6.4% corresponding data from current farm economy is given the above column.

Table E.3.5-1 Internal Rate of Return and Benefit Cost Ratio

#### (1) Economic and Financial Internal Rate of Return

×	W	ITHOUT MANG	:	WITH MANGOL DAM		
AREA	CROPPING					
1 .		EIRR	FIRR		EIRR	FIRR
I	NTENSITY					
TOTAL		13.5%	10.1%		9.3%	6.5%
PROJECT	158.7%		-			
HW-1	164.5%	7.3%	7.0%		6.9%	5.7%
HE-1	162.5%	9.8%	8.6%		9.3%	6.6%
HE-2	156.1%	9.4%	8.5%		9.2%	6.3%
HE-3	159.9%	12.9%	9.9%		10.8%	6.9%
AW-1	157.3%	15.6%	10.6%		9.0%	5.9%
AW-2	158.5%	20.0%	13.7%		14.9%	9.2%
AE-1	158.0%	17.4%	11.8%		10.8%	6.9%
AE-2	156.4%	17.8%	12.2%	,	9.9%	6.6%
AE-3	153.4%	13.2%	10.4%		4.5%	4.0%

## (2) Benefit/Cost Ratios on Without-Mangol Dam Basis\*

<u>B/0</u>	by Econo	omic Price	В	/C by Finan	cial Price	2	
AREA			*			- 1. - 1.	
DISCOUNT	at 12%	at 9%	at 6%	at 12%	at 9%	at 6%	at 3%
RATE of I	3/C			200	1		
TOTAL	1.14	1.53	2.20	-	1.13	1.63	2.56
PROJECT		1					
HW-1		-	1.18	-	-	1.23	1.94
HE-1		1.08	1.56	_	-	1.38	2.16
HE-2		1.05	1.50			1.36	2.13
HE-3	1.08	1.44	2.04		1.09	1.55	2.40
AW-1	1.34	1.80	2.58	, <del>-</del> :	1.18	1.70	2.64
AW-2	1.85	2.50	3.61	1.17	1.58	2.29	3.61
AE-1	1.51	2.01	2.87		1.31	1.87	2.90
AE-2	1.55	2.08	2.96	1.02	1.37	1.95	3.03
AE-3	1.11	1.49	2.12		1.15	1.65	2.56

Note : \* B/Cs on With-Mangol Dam basis are too low to present here. B/C values below 1.00 are not listed ( with the mark - ).

Table E.3.5-2 CALCULATION OF EIRR FOR MARAZ PROJECT AS TOTAL WITHOUT MANGOL DAM

r	WITHOUT MANGOL DAM										
( )		!			ļ	Case		Case	- 2	Case	- 3
	1	1.1				NPV		NPV		NPV	
	Capital	D & M Cost	Total			Int.=	0.11	Ĭnt.=	0.12	Int.=	0.13
Year	Cost	]	With Dam	Benefit	Return	Cost	Benefit	Cost	Benefit	Cost	Benefit
1	9292	0	9292	Û	-9292	2050	0	2032	0	2014	0
2	7760	0	7760	0	-7760	6298	0	6196	0	8077	0
3	19517	0	19517	0	-19517	14271	0	13892			0
4	33885	Ŏ	33885	0	-33885	22321	0		0	13526	
5	45205	44	45249	3023	40000			21535	0	20782	0
6	61875	93			-42226	26853	1794	25675	1715	24559	1641
7	53542		61968	6596	-55372	33131	3526	31395	3342	29764	3168
8		198	53738	15391	-38347	25883	7413	24308	6962	22842	6542
	52922	298	53220	24803	-28417	23094	10763	21495	· 10018	20019	9330
9	49588	394	49982	35110	-14872	19539	13725	18024	12661	26638	11688
10	45765	482	46247	45415	-832	16287	15994	14890	14622	13624	13379
11	35419	563	35982	54759	18777	11416	17374	10344	15742	9380	14276
12	18427	627	19054	62454	43400	5446	17852	4891	16030	4396	14409
13	8584	679	9263	66508	57245	2385	17127	2123	15242	1891	13579
14	0	679	679	68707	68028	158	15940	139	14059	123	12414
15	0	679	679	68707	68028	142	14360	124	12553	109	10986
16	0	679	679	68707	68028	128	12937	111			
17	0	679	879	68707	68028				11208	96	9722
18	0	1163	1163	68707		115	11655	99	10007	85	8603
19	0	1163			67544	178	10500	151	8935	129	7614
20	0		1163	68707	67544	160	9459	135	7977	114	6738
		1014	1014	68707	67693	126	8522	105	7123	88	5963
21	0	1464	1464	68707	67243	164	7677	136	6359	112	5277
22	. 0	1129	1129	68707	67578	114	6917	93	5678	77	4670
23	0	679	679	68707	68028	62	6231	50	5070	41	4132
24	0	679	679	68707	68028	55	5614	45	4527	36	3657
25	0	679	679	68707	68028	50	5057	40	4042	32	3236
26	0	679	679	68707	68028	45	4556	36	3609	28	2864
27	0	679	679	68707	68028	41	4105	32	3222	25	2534
28	0	1163	1163	68707	67544	63	3698	49	2877	38	2243
29	0	1163	1163	68707	67544	56					
30	0	1014	1014	68707	67693		3331	43	2568	34	1985
31	0	1464	1464			44	3001	34	2293	26	1756
32	0	1129		68707	67243	58	2704	44	2048	33	1554
			1129	68707	67578	40	2436	30	1828	23	1376
33	0	679	679	68707	68028	22	2195	16	1632	12	1217
34	0	679	679	68707	68028	20	1977	14	1457	11	1077
35	0	679	679	68707	68028	18	1781	13	1301	9	953
36	. 0	679	679	68707	68028	16	1605	11	1162	8	844
37	0	679	679	68707	68028	14	1446	10	1037	7	717
38	0	1163	1163	68707	67544	22	1302	16	926	11	661
39	0	1163	1163	68707	67544	20	1173	14	827	10	585
40	0	1014	1014	68707	67693	16	1057	11	738	8	517
41	0	1464	1464	68707	67243	20	952	11	659	10	458
42	Ö	1129	1129	68707	67578	14	858				
43	0	679	679	68707	68028	8	773	- 10 5	589	7	405
44	0	679							526	4	359
45	0		679	68707	68028	7	696	5	469	3	317
		679	679	68707	68028	6	627	1	419	3	281
46	0	679	679	68707	68028	6	565	4	374	2	249
47	0	679	679	68707	68028	. 5	509	3	334	2	220
48	0	1163	1163	68707	67544	8	459	5	298	3	195
49	. 0	1163	1163	68707	67544	7	413	5	266	3	172
50	0	1014	: 1014	68707	67693	5	372	4	238	2	152
	B/C =	5.96	479197	2856218	Total	217326	263031	201712	225569	193087	194741
					EIRR =		.20001	201116			101711
EIRR = 13.5 %											

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u></u>		,·····									
Year         Capital Cost         8 N Cost         Total Total Penefit         Return Cost         Enemit Cost         Denefit Cost         Cost Denefit Cost         Cost Denefit Cost         Cost Denefit Cost         Denefit Cost Denefit Cost         Cost Denefit Cost         Denefit Cost         Denefit Cost Denefit Cost         Dene			: [				Case	- 1	Case	- 2	i Case	- 3
Cost			1				NPV					
Cost	Year	Capital	D & M Cost	Total	Benefit	Return	Int.=	0.09	Int.=	0.10	Int.=	0.11
1   10445   0   10445   0   -10446   2413.6   0.0   2391.8   0.0   23270.3   0.0   23170.3   0.0   321735   0   9165   0   9165   0   -9165   7714.0   0.0   7344.4   0.0   7348.5   0.0   321735   0   -21735   1678.0   0.0   0.0   2312.8   0.0   15892.4   0.0   4   38782   0   36782   0   -36782   28057.1   0.0   0.0   2312.8   0.0   15892.4   0.0   4   38782   0   36782   0   -36782   28057.1   0.0   0.0   2312.8   0.0   24228.4   0.0   6   65371   102   65473   5291   -60102   38034.4   3154.9   36957.8   2896.6   3504.5   2225.8   0.0   24228.4   0.0   6   65371   102   65473   5291   -60102   38034.4   3154.9   36957.8   2896.6   3504.5   7594.6   6   6   6   6   6   6   6   6   6	2. 5	Cost	.3						<del> </del>		<del></del>	
2 9165 0 9165 0 - 9165 09165 7714.0 0.0 1 7374.4 0.0 - 7438.5 0.0 3 21735 0 21735 0 - 21735 16783.0 0.0 16329.8 0.0 18392.4 0.0 4 36782 0 36782 0 - 36782 2657.1 0.0 25122.6 0.0 24229.4 0.0 5 4914 47 49201 2425 4676 31977.3 1576.1 30550.0 1505.7 2918.4 1498.1 6 65371 102 65473 5291 60182 39933.4 3134.9 36857.6 2966.3 3504.5 5282.8 7 56781 211 56892 12346 44864 3176.6 6753.7 29245.9 6335.5 27490.7 5946.6 8 58527 321 56186 19898 39252 28178.8 9966.1 26135.5 9226.6 24962.7 5946.6 9 58527 321 56186 19898 39252 28178.8 9966.1 26135.5 9226.6 24994.1 8634.3 9 51919 424 52343 18766 - 33577 24100.2 8640.4 22188.5 7958.6 24962.7 7336.1 10 47786 518 48276 36843 -11843 20932.3 15399.7 18612.5 14046.5 17002.1 2831.1 11 36789 881 37440 43929 6489 14509.2 17023.9 13122.5 15396.8 1879.1 19337.9 12 19962 675 19737 50102 33056 7017.2 17813.0 6289.8 15964.0 4292.1 1233 6739 7731 3470 5335. 43885 3988.9 17403.3 2743.1 15455.0 2438.7 13738.7 115 0 731 5318 54367 216.1 1848.9 1518.3 1518.5 1406.5 170.2 1739.1 1518.5 10 1739.1 1518.5 54367 216.1 1848.9 1518.9 1518.5 1406.1 170.	1	10445	0	10445	0	-10445				<del>,</del>		
1	2									<del></del>		
4         36782         0         36782         0         36782         0.00         25122.6         0.0         24229.4         0.0           5         49154         47         49201         2425         46776         31977.3         1576.1         30550.0         1505.7         29198.4         1499.1           6         65371         102         65473         5291         -60182         39039.4         1514.9         38957.6         2806.6         35084.7         261         36987         221         3698.7         2511         56982         1224.0         44646         31176.6         675.7         29245.9         6335.5         27950.7         5946.6         86877         321         56148         18989.3         3620.2         2817.8         8988.1         28193.5         2826.8         24364.1         8634.7         721         864.4         22198.5         7956.6         20462.2         7336.1         1804.3         3118.3         2009.2         7335.5         7956.6         20462.2         7336.1         1804.3         3143.3         2009.2         3133.3         3143.3         2009.2         3133.3         3143.3         2009.2         3133.3         3143.3         2009.2         1731.3         3		21735										
5         49154         47         49201         2425         -46776         31977.3         1578.1         30550.0         1505.7         2918.4         1439.1           6         66571         102         65473         5291         -60182         39039.4         3154.9         36957.8         2988.6         35004.5         2828.6           7         56781         221         56982         1246         -44646         31176.5         6753.7         28245.9         8353.5         27450.7         5946.6         36882         3231         318766         -35377         24100.2         8640.4         22198.5         7958.5         24062.2         7336.1         10         47758         518         48276         36433         11843         20939.3         15389.7         18612.5         14048.5         17002.1         22811.1         130799         681         3749.0         43222.9         6489         14502.2         17023.9         13122.5         15358.0         18737         39379         18612.5         14048.5         11270.1         1823.0         1202.9         14349.1         1235.0         1702.2         1702.5         14341.2         1233.3         1313.3         1834.8         14322.2         1702.2 <td< td=""><td>1</td><td>36782</td><td></td><td></td><td>~-·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1	36782			~-·							
6         65371         102         65473         5291         -60102         39039.4         154.9         39397.6         2986.6         30004.5         2822.8           7         56781         211         56982         12406         -44646         31176.6         675.7         28245.9         6335.5         27450.7         5946.6         3988.1         26193.5         2827.8         24364.1         46634.7         7546.6         24364.1         46634.7         7546.6         24364.1         46634.7         7546.6         24364.1         46634.7         7546.6         24364.1         46634.7         7546.6         24364.1         46634.2         2336.8         1740.2         27356.1         1702.1         24364.1         46634.2         2336.8         1566.2         24062.2         7336.1         11         36739         681         3440         43929         6489         14509.2         17023.9         13122.5         15398.8         1161.1         1302.2         1702.1         131.3         3673.2         121.1         1307.9         1302.2         1731.3         131.3         3673.2         121.1         1303.9         131.2         151.3         1302.2         151.3         131.3         131.3         3618.2         3604.2 </td <td></td>												
7 56781 211 56992 12346 -44646 31178.6 6753.7 29245.9 6335.5 27459.7 5946.6 6 55827 321 56148 19898 -36230 28173.8 9888.1 26133.5 9282.6 24364.1 8634.3 9 51919 424 52343 18766 -33577 24100.2 8640.4 22198.5 7958.6 2062.7 2738.1 10 47759 5818 48276 36433 -11843 20392.3 15308.7 18612.5 14046.5 17002.1 12831.1 36759 881 57440 43929 6489 14509.2 17023.9 13122.5 1836.8 11879.1 1937.9 12 19062 675 19737 50102 30365 7017.2 17813.0 6228.8 15964.0 5641.6 14321.2 19062 675 19737 50102 30365 7017.2 17813.0 6228.8 15964.0 5641.6 14321.2 13 15993 731 9470 53355 43485 53088.9 7140.3 2743.1 15455.0 2438.7 13738.7 14 0 731 731 55118 54367 200.7 15132.0 175.0 13194.8 152.8 11519.3 151 0 731 731 55118 54367 200.7 15132.0 175.0 13194.8 152.8 11519.3 17 0 731 731 55118 54367 180.1 1302.5 159.1 11985.3 137.6 15038.3 17 0 1832 1832 55118 55266 388.4 11884.7 329.5 9012.2 2 522.2 7588.5 119 0 1832 1832 55118 55266 388.4 11884.7 329.5 9012.2 2 522.2 7588.5 119 0 1832 1832 55118 55266 388.4 11884.7 329.5 9012.2 2 522.2 7588.5 2 0 1493 1493 1493 55118 55265 266.4 9334.8 221.9 8192.9 1852.2 6635.5 2 0 1493 1493 15318 55118 55365 266.8 934.8 221.9 8192.9 1852.2 6635.5 2 0 1493 1493 15318 55118 55365 266.8 934.8 221.9 8192.9 1852.2 6635.5 2 0 1493 1493 15318 55367 266.4 9334.8 221.9 8192.9 1852.2 6635.5 2 0 0 1493 1493 15318 55367 266.4 9334.8 221.9 8192.9 1852.2 6635.5 2 0 0 1493 1493 15318 55367 266.4 9334.8 221.9 8192.9 1852.2 6635.5 2 0 0 1493 1493 15318 55368 104.1 90.7 7594.2 81.6 6155.5 66.3 4067.1 128.2 12.0 2516 2516 55118 55367 266.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9334.8 221.9 8192.9 1852.2 6635.5 2 26.4 9 234.8 221.9 8192.9 1852.2 6635.5 2 26.4 9 234.8 221.9 8192.9 1852.2 1852.2 6635.5 2 26.4 9 234.8 221.9 8192.9 1852.2 6635.5 2 26.4 9 234.8 221.9 8192.9 1852.2 6635.5 2 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9 26.4 9									30330.0			1439.1
8 55827 321 56148 19898 -35230 28178.8 9988.1 26193.5 9282.6 24364.1 8634.3 9 51919 424 52343 18766 -33577 24100.2 8640.4 22198.5 7938.6 20462.2 7338.1 10 47758 518 48276 36433 -11843 20392.3 15388.7 18612.5 14046.5 17002.1 12831.1 36759 681 37440 43929 6489 14599.2 17023.9 13122.5 15396.8 11879.1 13937.9 12 19962 675 19737 50102 30365 7017.2 17023.9 13122.5 15396.8 11879.1 13937.9 131 8470 53355 43885 3088.9 17403.3 2743.1 15455.0 2438.7 13793.7 13 8470 53355 43885 3088.9 17403.3 2743.1 15455.0 2438.7 13793.7 15 0 731 731 55118 54387 201.7 15493.9 192.5 14514.3 198.6 12787.1 15 0 731 731 55118 54387 201.7 1512.0 175.0 13194.8 152.8 1519.9 17 0 731 731 55118 54387 201.7 1512.0 175.0 13194.8 152.8 1519.9 17 0 731 731 55118 54387 201.7 1512.0 175.0 13194.8 152.8 1519.9 1832 1832 55118 53266 388.4 1188.7 232.5 1919.5 1919.5 3 317.6 10378.3 19 0 1832 1832 55118 53226 388.4 1188.7 32.5 1919.5 1912.5 22.7 252.2 252.2 252.2 20 0 1493 1493 55118 55226 388.4 1188.7 32.5 1919.9 299.5 1912.2 252.2 752.2 252.2 252.2 20 0 1734 1734 55118 53266 388.3 10719.9 299.5 1912.2 252.2 252.2 252.2 20 0 1734 1734 55118 53266 388.4 1188.7 252.5 1912.2 252.2 252.2 252.2 20 0 1734 1734 55118 53266 388.4 1887.7 252.5 1912.2 25									36937.8			
9   51919   424   52343   18766   -33577   24100.2   8646.4   22198.5   7955.6   20462.2   7336.1   10   447758   518   48276   36433   -11843   20392.3   15388.7   18612.5   14046.5   71002.1   12831.1   11   36759   891   37440   43929   6469   44599.2   17023.9   13122.5   15396.8   1879.1   31937.9   12   19962   675   19737   50102   30365   7017.2   17813.0   6228.8   15964.0   5641.6   14321.2   13   8793   731   731   55118   54387   2428.7   16493.9   122.5   15350   2438.7   12793.7   14   0   731   731   55118   54387   220.7   1512.0   175.0   13194.8   152.8   1519.9   15   0   731   731   55118   54387   248.1   13828.6   159.1   11995.3   137.6   15078.3   17   0   731   731   55118   54387   184.1   13882.6   159.1   11995.3   137.6   15078.3   18   0   1832   1832   55118   55266   336.3   10719.9   299.5   9012.2   252.2   7585.5   20   0   1483   1493   55118   53625   266.4   8834.8   221.9   8192.9   185.2   6864.6   22   0   1754   1754   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   23   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   24   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   25   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   26   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   27   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   28   0   731   731   55118   53626   336.4   6277.7   215.5   6771.0   176.6   6548.7   29   0   1483   1493   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   20   0   731   731   55118   53626   336.3   10719.9   299.5   9012.2   252.2   7585.5   21   0   2516   2516   2516   2518   3364   283.4   6277.7   215.5   66771.0   176.6   6554.2   22   0   1754   1754   55118   53626   366.3   10719.9   902.7   340.0   7448.1   2811.1   23   0   731   731   55118   54387   71.4   5379.9   55.8   4204.3   43.7   43.7   24   0   731   731	<b></b>	56027								6335.5		
10   47786   518   48276   36433   -11843   26392.3   15396.7   18612.5   14046.5   17092.1   12831.1   136756   681   37440   43929   6488   4569.2   17023.9   13122.5   15386.8   17673.1   13937.9   12   18062   575   19737   50102   30365   7017.2   17813.0   6288.8   15964.0   5641.6   16321.2   13   6739   731   9470   53355   43885   3088.9   17403.3   2743.1   15455.0   2348.7   13793.7   1373   373   35118   54387   34397   218.7   18439.9   192.5   14514.3   189.6   12787.1   15   0   731   731   55118   54387   200.7   15122.0   175.0   13104.8   152.8   11319.3   17   0   731   731   55118   54387   1863.9   12736.3   144.6   10904.8   124.0   9349.8   18   0   1832   1832   55118   55266   388.4   11684.7   329.5   9913.5   2800.0   4223.3   19   0   1832   1832   55118   55265   388.4   11684.7   329.5   9913.5   2800.0   4223.3   22   0   1493   1493   55118   55625   266.4   9834.8   221.9   8102.9   1865.2   6836.5   22   0   1754   1754   55118   55365   266.4   9834.8   221.9   8102.9   1865.2   6836.5   22   0   731   731   55118   54387   100.7   7394.2   611.6   6155.5   663.8   498.8   22   0   731   731   55118   54387   100.7   7394.2   611.6   6155.5   663.8   498.8   22   0   1754   1754   55118   53364   263.4   2277.7   215.5   65710.0   736.8   238.8		51010										
11   36759   681   3740   43929   6489   14509.2   77023.9   13122.5   15396.8   1879.1   10937.9     12   19062   675   19737   50102   30365   7017.2   77813.0   2888.8   15960.0   5641.6   14321.2     13   6739   731   9470   53335   43885   3088.9   77403.3   2743.1   15455.0   2438.7   13739.7     14   0   731   731   55318   54387   218.7   16493.9   192.5   14514.3   169.8   12787.1     15   0   731   731   55118   54387   218.7   16493.9   192.5   14514.3   169.8   12787.1     16   0   731   731   55118   54387   164.1   13882.6   153.1   11985.3   137.6   10378.3     17   0   731   731   55118   54387   168.9   12736.3   144.6   10901.8   124.0   9349.8     18   0   1802   1802   55118   53286   338.4   11684.7   329.5   9913.5   260.0   4423.3     19   0   1802   1802   55118   53286   338.4   11684.7   329.5   9913.5   260.0   4423.3     19   0   1802   1802   55118   53286   336.3   10719.9   299.5   9912.2   252.2   7588.5     20   0   1493   1493   55118   53286   336.3   10719.9   299.5   9912.2   252.2   7588.5     21   0   2516   2516   55118   53286   336.3   10719.9   299.5   9912.9   265.2   2686.5     22   0   1754   1754   55118   53286   336.3   10719.9   299.5   9912.2   252.2   2788.5     22   0   1754   1754   55118   53286   336.3   10719.9   299.5   9912.2   252.2   2788.5     22   0   731   731   55118   53364   263.4   8277.7   215.5   6771.0   176.6   5548.7     23   0   731   731   55118   54387   77.8   5864.1   637.2   74.2   5596.9   59.7   4503.4     24   0   731   731   55118   54387   77.8   5864.1   61.3   66.7   5586.2   56.8   4984.8     25   0   731   731   55118   54387   77.8   5864.1   61.3   61.5   66.9   499.8     26   0   731   731   55118   54387   77.8   5864.1   61.3   61.5   66.9   499.8     25   0   1832   1832   55118   53286   150.5   4383.3   131.1   2871.6   99.0   59.7   4503.4     26   0   731   731   55118   54387   77.8   5364.1   61.5   6771.0   74.2   5596.9   59.7   4503.4     27   0   731   731   55118   54387   77.4   5366.1   61.5   56.8   77.												7336.1
12							20392.3		18612.5	14046.5		
13					43929		14509.2		13122.5	15396.8	11879.1	
14			675		50102	30365			6288.8	15964.0	5641.6	14321.2
14					53355	43885	3088.9	17403.3				13739.7
15	14			731		54387						
16			731			54387					152.8	
17	16	0	731	731								
18	17	0									· · · · · · · · · · · · · · · · · · ·	
19	.18	0							····			
20         0         1493         1493         55118         53625         266.4         9834.8         221.9         8182.9         185.2         6836.5           21         0         2516         2516         55118         52002         411.9         9022.7         340.0         7448.1         281.1         6159.0           22         0         1734         1754         35118         53384         263.4         8277.7         215.5         6771.0         176.6         5548.7           23         0         731         731         55118         54387         190.7         7594.2         81.6         6155.5         66,3         4998.8           24         0         731         731         55118         54387         90.4         6967.2         74.2         5595.9         59.7         4503.4           25         0         731         731         55118         54387         77.8         399.9         67.5         5687.2         53.8         4057.1           26         0         731         731         55118         54387         77.4         5394.9         67.5         5687.2         53.8         4657.1           27	19	0										
21 0 2516 2516 55118 52602 411.9 9022.7 340.0 7448.1 281.1 6159.0 22 0 1754 1754 55118 53564 263.4 8277.7 215.5 6771.0 176.6 5548.7 23 0 731 731 55118 54387 100.7 7594.2 61.6 6155.5 66.3 4998.8 24 0 731 731 55118 54387 92.4 6867.2 74.2 5595.9 59.7 4503.4 25 0 731 731 55118 54387 92.4 6867.2 74.2 5595.9 59.7 4503.4 25 0 731 731 55118 54387 77.8 5864.1 61.3 4624.7 46.5 3655.1 27 0 731 731 55118 54387 77.8 5864.1 61.3 4624.7 46.5 3655.1 27 0 731 731 55118 54387 77.8 5864.1 61.3 4624.7 46.5 3655.1 27 0 731 731 55118 54387 77.8 5864.1 61.3 4624.7 46.5 3655.1 27 0 731 731 55118 54387 77.8 5864.1 61.3 4624.7 46.5 3655.1 27 0 731 731 55118 54387 71.4 5379.9 55.8 4204.3 43.7 3292.9 28 0 1832 1832 55118 53286 164.1 4935.7 127.0 3822.1 98.6 2966.5 30 1832 1832 55118 53286 150.5 4528.2 115.5 3474.6 88.8 2672.6 30 1493 1493 55118 53286 150.5 4528.2 115.5 3474.6 88.8 2672.6 30 1493 1493 55118 53625 174.0 3811.3 311.1 2871.6 99.0 2168.1 32 0 1754 1754 55118 53364 171.3 3496.6 83.1 2610.5 62.2 1934.2 33 0 731 731 55118 54387 42.5 3207.9 31.5 12.7 22.3 3 1760.5 335 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 21.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 12.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 21.0 1566.0 35 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 1620.9 15.4 1139.7 34 242 0 1754 1754 55118 53286 69.3 2044.9 49.0 1473.6 34.7 1044.8 39 0 1832 1832 55118 53286 63.6 1912.8 44.5 1339.6 31.3 94.1 242.2 0 1754 1754 55118 53286 63.6 1912.8 44.5 1339.6 31.3 94.1 242.2 0 1754 1754 55118 53286 63.6 1912.8 44.5 1339.6 31.3 94.1 242.2 0 1754 1754 1754 55118 53286 26.0 3.3 2044.9 49.0 1473.6 34.7 1044.8 44.0 731 731 55118 53286 26.0 3.3 2044.9 49.0 1473.6 34.7 1044.8 44.0 731 731 55118 53286 26.0 3.	20	0										
22         0         1754         1754         55118         53364         263.4         8277.7         215.5         6771.0         176.6         5548.7           23         0         731         731         55118         54387         190.7         7394.2         81.6         6155.5         66.3         4998.8           24         0         731         731         55118         54387         92.4         6967.2         74.2         5595.9         59.7         4503           25         0         731         731         55118         54387         92.4         6967.2         74.2         5595.9         59.7         4503           26         0         731         731         55118         54387         77.8         3664.1         61.3         4624.7         49.5         3655.1           27         0         731         731         55118         54387         77.8         3664.1         61.3         4624.3         43.7         73.2929           28         0         1832         1802         55118         53286         160.1         1493.3         43.7         69.6         2966.5           30         0         1493												
23         0         731         731         55118         54387         100.7         7594.2         81.6         6155.5         66.3         4998.8           24         0         731         731         55118         54387         92.4         6967.2         74.2         5596.9         59.7         4503.4           25         0         731         731         55118         54387         77.8         3684.1         61.3         4624.7         48.5         3865.1           26         0         731         731         55118         54387         77.8         3684.1         61.3         4624.7         48.5         3655.1           27         0         731         731         55118         55286         164.1         4935.7         127.0         3822.1         98.6         2966.5           29         0         1832         1832         55118         55286         164.1         4935.7         127.0         3822.1         98.6         2966.5           30         0         1493         1493         55118         53686         116.5         352.2         115.5         3474.6         88.8         2672.6           30         0 <td></td> <td><del></del></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9022.1</td> <td></td> <td></td> <td></td> <td></td>		<del></del>						9022.1				
24         0         731         731         55118         54387         92.4         6867.2         74.2         5595.9         59.7         4593.4           25         0         731         731         55118         54387         84.8         6391.9         67.5         5087.2         53.8         4057.1           26         0         731         731         55118         54387         77.8         5364.1         61.3         4624.7         48.5         3655.1           27         0         731         731         55118         54387         77.4         5379.9         55.8         4204.3         43.7         3292.9           28         0         1832         1832         55118         53286         164.1         4335.7         127.0         3822.1         98.6         2966.5           29         0         1832         1832         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1493         1493         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0 </td <td>23</td> <td></td>	23											
25         0         731         731         55118         54387         84.8         6391.9         67.5         5087.2         53.8         4067.1           26         0         731         731         55118         54387         77.8         5864.1         61.3         4624.7         48.5         3655.1           27         0         731         731         55118         54387         77.4         5379.9         55.8         4204.3         43.7         3292.9           28         0         1832         1832         55118         53286         164.1         4935.7         127.0         3822.1         98.6         2965.5           29         0         1832         1832         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1493         1493         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1793         1754         1754         35118         53622         174.0         3811.3         131.1         2871.6         99.0         2169.1           <					55110					0100.0		
26         0         731         731         55118         54387         77.8         5864.1         61.3         4624.7         48.5         3655.1           27         0         731         731         55118         54387         71.4         5379.9         55.8         4204.3         43.7         3292.9           28         0         1832         1832         55118         53286         164.1         4935.7         127.0         3822.1         98.6         2966.5           30         0         1493         1493         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1493         1493         55118         53625         112.5         41454.3         85.6         3158.7         65.2         2407.7           31         0         2516         2516         55118         52602         174.0         3811.3         131.1         2871.6         99.0         2169.1           32         0         1754         1754         55118         53364         111.3         3496.6         83.1         2610.5         62.2         1954.2           33												
27 0 731 731 55118 54387 71.4 5379.9 55.8 4204.3 43.7 3292.9 28 0 1832 1832 55118 53286 164.1 4935.7 127.0 3822.1 98.6 2966.5 29 0 1832 1832 55118 53286 150.5 4528.2 115.5 3474.6 88.8 2672.6 30 0 1493 1493 55118 53286 150.5 4528.2 115.5 3474.6 88.8 2672.6 31 0 2516 2516 55118 52602 174.0 3811.3 131.1 2871.6 99.0 2189.1 32 0 1754 1754 55118 53364 111.3 3496.6 83.1 2610.5 62.2 1954.2 33 0 731 731 55118 54387 42.5 3207.9 31.5 2373.2 23.3 1760.5 34 0 731 731 55118 54387 39.0 2943.0 28.6 2157.5 21.0 1586.0 35 0 731 731 35118 54387 35.8 2700.0 26.0 1961.3 19.0 1428.9 36 0 731 731 55118 54387 32.9 2477.1 23.6 1783.0 17.1 1287.3 37 0 731 731 55118 54387 30.1 2272.5 21.5 1620.9 15.4 1159.7 38 0 1832 1832 55118 53286 69.3 2084.9 49.0 1473.6 34.7 1044.8 39 0 1832 1832 55118 53286 69.3 2084.9 49.0 1473.6 34.7 1044.8 40 0 1493 1493 55118 53286 63.6 1912.8 44.5 1339.6 31.3 941.2 40 0 0 1493 1493 55118 53286 673.6 1912.8 44.5 1339.6 31.3 941.2 41 0 2516 2516 55118 53286 69.3 2084.9 39.0 1473.6 34.7 1044.8 41 0 2516 2516 55118 53286 63.6 1912.8 44.5 1339.6 31.3 941.2 42 0 1754 1754 55118 53286 69.3 2084.9 39.0 1473.6 34.7 1044.8 41 0 2516 2516 55118 53286 69.3 2084.9 39.0 1473.6 34.7 1044.8 41 0 2516 2516 55118 53286 63.6 1912.8 44.5 1339.6 31.3 941.2 42 0 1754 1754 55118 53286 63.6 1912.8 44.5 1339.6 31.3 941.2 43 0 731 731 55118 53286 63.6 1912.8 14.5 1339.6 31.3 941.2 44 0 731 731 55118 54387 18.0 1355.0 12.1 915.0 8.2 620.0 44 0 731 731 55118 54387 18.0 1355.0 12.1 915.0 8.2 620.0 44 0 731 731 55118 54387 18.0 1355.0 12.1 915.0 8.2 620.0 44 0 731 731 55118 54387 13.9 1046.3 9.1 687.4 6.0 453.4 47 0 731 731 55118 54387 13.9 1046.3 9.1 687.4 6.0 453.4 48 0 1832 1832 55118 53286 29.3 880.7 18.9 566.1 12.2 368.0 49 0 1832 1832 55118 53286 29.3 880.7 18.9 566.1 12.2 368.0 49 0 1832 1832 55118 53286 20.0 17.4 13.1 17.5 16.5 11.0 331.5 50 0 1493 1493 55118 53286 20.1 741.3 12.7 469.5 8.1 22.8 68.0 50 0 1842 1832 55118 53286 20.0 17.4 13.1 12.7 469.5 8.1 22.8 68.0 50 0 1493 1493 55118 53286 20.0 17.4 13.1 12.7 469.5 8.1 228.6												
28         0         1832         1632         55118         53266         164.1         4935.7         127.0         3822.1         98.6         2966.5           29         0         1832         1832         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1493         1493         55118         53625         112.5         4154.3         85.6         3158.7         65.2         2407.7           31         0         2516         2516         55118         52602         174.0         3811.3         131.1         2871.6         99.0         2169.1           32         0         1754         1754         55118         53364         111.3         3496.6         83.1         2610.5         62.2         1954.2           33         0         731         731         55118         54387         42.5         3207.9         31.5         2373.2         23.3         1766.5           34         0         731         731         55118         54387         35.8         2700.0         28.6         2157.5         21.0         1586.0           35         <												
29         0         1832         1832         55118         53286         150.5         4528.2         115.5         3474.6         88.8         2672.6           30         0         1493         1493         55118         53625         112.5         4154.3         85.6         3158.7         65.2         2407.7           31         0         2516         2516         55118         52602         174.0         3811.3         131.1         2871.6         99.0         2169.1           32         0         1754         1754         55118         53364         111.3         3496.6         83.1         2610.5         62.2         1954.2           33         0         731         731         55118         54387         42.5         3207.9         31.5         2373.2         23.3         1760.5           34         0         731         731         55118         54387         39.0         2943.0         28.6         2157.5         21.0         1586.0           35         0         731         731         55118         54387         35.8         2700.0         26.0         1961.3         19.0         1428.9           36         0										4204.3	*******	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						53286						2672.6
32         0         1754         1754         5518         5364         111.3         3496.6         83.1         2610.5         62.2         1954.2           33         0         731         731         55118         54387         42.5         3207.9         31.5         2373.2         23.3         1760.5           34         0         731         731         55118         54387         39.0         2943.0         28.6         2157.5         21.0         1586.0           35         0         731         731         55118         54387         35.8         2700.0         26.0         1961.3         19.0         1428.9           36         0         731         731         55118         54387         32.9         2477.1         23.6         1783.0         17.1         1287.3           37         0         731         731         55118         54387         30.1         2272.5         21.5         1620.9         15.4         1159.7           38         0         1832         1832         55118         53286         69.3         2084.9         49.0         1473.6         34.7         1044.8           40         0					55118					3158.7	65.2	2407.7
33         0         731         731         35118         54387         42.5         3207.9         31.5         2373.2         23.3         1760.5           34         0         731         731         55118         54387         39.0         2943.0         28.6         2157.5         21.0         1586.0           35         0         731         731         55118         54387         35.8         2700.0         26.0         1961.3         19.0         1428.9           36         0         731         731         55118         54387         32.9         2477.1         23.6         1783.0         17.1         1287.3           37         0         731         731         55118         54387         30.1         2272.5         21.5         1620.9         15.4         1159.7           38         0         1832         1832         55118         53286         69.3         2084.9         49.0         1473.6         34.7         1044.8           40         0         1493         1493         55118         53286         63.6         1912.8         44.5         1339.6         31.3         941.2           41         0											99.0	2169.1
34         0         731         731         55118         54387         39.0         2943.0         28.6         2157.5         21.0         1586.0           35         0         731         731         55118         54387         33.8         2700.0         26.0         1961.3         19.0         1428.9           36         0         731         731         55118         54387         32.9         2477.1         23.6         1783.0         17.1         1287.3           37         0         731         731         55118         54387         30.1         2272.5         21.5         1620.9         15.4         1159.7           38         0         1832         1832         55118         53286         69.3         2084.9         49.0         1473.6         34.7         1044.8           39         0         1832         1832         55118         53286         63.6         1912.8         44.5         1339.6         31.3         941.2           40         0         1493         1493         5518         53625         47.5         1754.8         33.0         1217.8         23.0         848.0           41         0					55118					2610.5	62.2	1954.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$										2373.2	23.3	1760.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					55118	<u>54</u> 387	39.0	2943.0	28.6	2157.5	21.0	1586.0
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							35.8			1961.3		1428.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						54387	32.9					1287.3
38         0         1832         1832         55118         53286         69.3         2084.9         49.0         1473.6         34.7         1044.8           39         0         1832         1832         55118         53286         63.6         1912.8         44.5         1339.6         31.3         941.2           40         0         1493         1493         55118         53625         47.5         1754.8         33.0         1217.8         23.0         848.0           41         0         2516         2516         55118         52602         73.5         1609.9         50.5         1107.1         34.9         763.9           42         0         1754         1754         55118         5364         47.0         1477.0         32.0         1006.5         21.9         688.2           43         0         731         731         55118         54387         18.0         1355.0         12.1         915.0         8.2         620.0           44         0         731         731         55118         54387         16.5         1243.2         11.0         831.8         7.4         558.6           45         0         <						54387	30.1					1159.7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					55118	53286						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		0										
41         0         2516         2516         55118         52602         73.5         1609.9         50.5         1107.1         34.9         763.9           42         0         1754         1754         55118         53364         47.0         1477.0         32.0         1006.5         21.9         688.2           43         0         731         731         55118         54387         18.0         1355.0         12.1         915.0         8.2         620.0           44         0         731         731         55118         54387         16.5         1243.2         11.0         831.8         7.4         558.6           45         0         731         731         55118         54387         15.1         1140.5         10.0         756.2         6.7         503.2           46         0         731         731         55118         54387         13.9         1046.3         9.1         687.4         6.0         453.4           47         0         731         731         55118         54387         12.7         959.9         8.3         624.9         5.4         498.4           48         0         1832		0										
42         0         1754         1754         55118         53364         47.0         1477.0         32.0         1006.5         21.9         688.2           43         0         731         731         55118         54387         18.0         1355.0         12.1         915.0         8.2         620.0           44         0         731         731         55118         54387         16.5         1243.2         11.0         831.8         7.4         558.6           45         0         731         731         55118         54387         15.1         1140.5         10.0         756.2         6.7         503.2           46         0         731         731         55118         54387         13.9         1046.3         9.1         687.4         6.0         453.4           47         0         731         731         55118         54387         12.7         959.9         8.3         624.9         5.4         498.4           48         0         1832         1832         55118         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832	41	0										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	42	0						9				
44         0         731         731         5518         54387         16.5         1243.2         11.0         831.8         7.4         558.6           45         0         731         731         5518         54387         15.1         1140.5         10.0         756.2         6.7         503.2           46         0         731         731         5518         54387         13.9         1046.3         9.1         687.4         6.0         453.4           47         0         731         731         5518         54387         12.7         959.9         8.3         624.9         5.4         408.4           48         0         1832         1832         5518         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832         1832         5518         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534			<del></del>									
45         0         731         731         55118         54387         15.1         1140.5         10.0         756.2         6.7         503.2           46         0         731         731         55118         54387         13.9         1046.3         9.1         687.4         6.0         453.4           47         0         731         731         55118         54387         12.7         959.9         8.3         624.9         5.4         408.4           48         0         1832         1832         55118         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832         1832         55118         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534         2281911         Total         263849.0         289263.9         247834.8         243893.4         233163.2         207333.3	1											
46         0         731         731         55118         54387         13.9         1046.3         9.1         687.4         6.0         453.4           47         0         731         731         55118         54387         12.7         959.9         8.3         624.9         5.4         408.4           48         0         1832         1832         55118         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832         1832         55118         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534         2281911         Total         263849.0         289263.9         247834.8         243893.4         233163.2         207333.3								11/0 5				
47         0         731         731         55118         54387         12.7         959.9         8.3         624.9         5.4         408.4           48         0         1832         1832         55118         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832         1832         55118         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534         2281911         Total         263849.0         289263.9         247834.8         243893.4         233163.2         207333.3												
48         0         1832         1832         55118         53286         29.3         880.7         18.9         568.1         12.2         368.0           49         0         1832         1832         55118         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534         2281911         Total         263849.0         289263.9         247834.8         243893.4         233163.2         207333.3					55119			1040.5		087.4		
49         0         1832         1832         55118         53286         26.9         808.0         17.2         516.5         11.0         331.5           50         0         1493         1493         55118         53625         20.1         741.3         12.7         469.5         8.1         298.6           B/C =         4.38         520534         2281911         Total         263849.0         289263.9         247834.8         243893.4         233163.2         207333.3												
50 0 1493 1493 55118 53625 20.1 741.3 12.7 469.5 8.1 298.6 B/C = 4.38 520534 2281911 Total 263849.0 289263.9 247834.8 243893.4 233163.2 207333.3						53200						
B/C = 4.38 520534 2281911 Total 263849.0 289263.9 247834.8 243893.4 233163.2 207333.3						53280						
	1				220101			/41.3	12.7	469.5	8.1	
FIKK = 10.1 %	}	D/ U #	4.30	JZUJJ4			263849.0	Z89Z63.9	Z4/834.8			207333.3
	<u> </u>	<del></del>	<del></del>			HKK =				10.1	7 2	

Table E.3.6-1 Results of Sensitivity Analysis by Economic Price

Impa	act Analysed	<u>With</u> Economic B/C a	out Dam B t rate <u></u> F		Wit EconomB/C	<u>h Dam Basi</u> at rate <u>E</u>	<u>s</u> .I.R.R.
(1) (2)	WITHOUT IMPACT DELAY IN LAND	1.53	9%	13.5%	1.13	- 9%	9.3%
(3)	CONSOLIDATION WORKS BY 4 YEARS DELAY IN YIELD	1.42	6%	12.4%	1.37	6%	8.4%
(4)	EFFECT BY 2YEARS COST BOOSTED BY	1.28	9%	11.1%	1.28	6%	7.9%
(4)	15% RELATED TO PRODUCT PRICES	1.36	9%	12.0%	1.28	6%	8.0%
(5)		1.19	9%	10.4%	1.20	6%	7.2%
(6)	INTERACTION BETWEEN 2 AND 3	1.11	9%	9.9%	1.13	6%	6.8%
(7)	INTERACTION BETWEEN 3 AND 1	1.23	9%	11.0%	1.22	6%	7.5%
(8)		1.58	6%	9.2%	1.07	6%	6.4%

Sensitibity Analysis To Relate Berseem Acreage With On-Farm Cost unit: ha, %, million Rial

<u>C</u>		th berseem	<u>E. I</u>		% of ha		Total L.C.	
		of the tota			and the second s	lancing	cost to de	rive
	ha paddy	field 75,9	185ha as	proposed	with E	IRR =12%	E.I.R.R. a	t 12%
		% b	y origi					
		nal	LC cost	•				
	50,384	66.3%	15.8%	15.8%	· -	-		
	37,993	50.0%	13.5%	13.5%	<u> </u>	<b>-</b> .	<del></del>	
	36,093	47.5%	12.8%	12.8%	. <del>.</del> .	<del>-</del>	· _	
	34,193	45.0%	12.0%	12.0%	.100.0%	2.82	204,562	
	32,294	42.5%	11.3%	12.0%	85.0%	2.40	173,878	
	30,394	40.0%	9.5%	12.0%		1.92	139,102	
	28,494	37.5%	8.7%	12.0%		1.45	105,372	
	26,595	35.0%	8.0%	12.0%		0.99	71,597	
	25,328	33.3%	7.4%	12.0%		0.68	49.095	

Note: provided that the land consolidation (L.C.) component of the project cost should be fully disbursed, berseem coverage of winter crop maintains EIRR value at 12% until it drops at 45% then EIRR falls up to 7.4% when the coverage dwindled to one third of paddy acreage. If EIRR is to be held at 12%, then land consolidation cost should be economized at the rates up to 245 of the original cost in case of coverage by 1/3. In this term, 1% loss of berseem acreage is equivalent to the 6.5% of cost economization for land consolidation. That is to say, land use with berseem acreage below 30% would not allow any land consolidation works, or inversely speaking crop intensity should be kept higher than 138% (including other winter crops designed) as far as L.C is employed in the Project.

the state of the s				TIII	. /
<u>ITEMS/year</u>	<u>1986</u>	<u>1987</u>	<u>1988 1989</u>	1990	MEAN
food	28.5	19.2	18.8 15.3	4.3	17.2
housing	19.8	23.1	27.5 17.2	7.6	19.0
fuel	10.9	17.0	8.0 - 5.8	7.5	7.5
cloth	8.4	41.2	55.6 40.0	22.1	33.5
furniture	40.5	59.6	53.8 20.7	3.0	35.5
transport	16.6	43.5	37.2 10.9	22.1	26.1
health	6.9	2.8	$5.0 \ 17.3$	14.6	9.3
education	85.9	46.3	39.7 - 0.2	-7.5	32.8

33.6

8.7

32.9

14.2

17.4

19.8

27.0

32.9

E.3.6-2 Estimated Inflation Rate for Construction

12.7 14.2

10.2 14.9

36.0 28.8

27.6 31.9

27.1 22.3

26.8 15.0

22.0 18.4

24.7 13.2

17.6

11.0

-4.6

17.0

16.9

21.0

20.0

24.7

19.7

11.1

23.3

18.3

17.5

17.8

22.0

25.0

Annual rate of inflation for construction cost is from the mean among housing, fuel, transport wage to give 15.5% lower than the farmers ougrain price, 23 Thus, inflation raises price level of agricultural produere no cost price squeeze has been observed in rice ption, because ia cash crop. All these are taken into account for assessing the impact of inflation on benefit - cost flows.

ANNUAL INFLATION RATE FOR CROP BEN= 23.3 % - 6.8 % = 15.5 % D.O. FOR CONSTRUCTION COST AND CONNCIES = 15.5 %

others

RURAL AREA RETAIL PR 3.6

RURAL FOOD RETAIL PR 6.4

WHOLESALE DOMESTIC P22.5

WHOLESALE IMPORTED P29.4

ALL AREA

labor wage10.9

grain pr. 23.3

RETAIL PR. 0.8

20.4

