D2 Data for Financial Analysis

- 1. Estimated Incremental NPV for Each Cropping Pattern Change
 - (1) Annual Benefit and Cost in Each Cropping Pattern Change
 - (2) Calculation Example of Estimated Incremental NPV
 - Change from Dry Garming without Terrace to Agroforestry 1 with Bench Terrace -
- 2. Estimated Incremental NPV for Checkdam
- 3. Estimated Incremental NPV for Demonstration Plot
- 4. Incremental Net Cash Flow and Incremental Net Present Value in Total Investment Analysis

1. Estimated Incremental NPV for Each Cropping Pattern Change

MIX1_F02

Citarly Ratershed Development Project (1) Annual Benefit and Cost in Each Cropping Pattern Change Financial Analysis 1 Change Pattern A Change from Without Projecty Existing Mixed Garden 1 Change from Citich Projecty Forest 2

Table 1:

11.000 	Annual	Annual Benefit and Cost CWith Project> Forest Base Year Base Item Quantity seccastates(Kc.W3)	CWith Project) Base Year Ba Price Qu	t> Forest 2 Base Inc Quantity Pro max(Kx, M3) ===================================	2 Increase in* Total Productivity Value/Year ses(Maximum) sens(Ro) sense	Total Value/Year == (Rp)======	н н н н н н н н н н н н н н н н н н н	Kithout Proje Base Year Ba Price Qu price Qu	(Without Project) Existing Wixed Garden Jase Year Base Increase in* Tota Arce Quantity Productivity Valu Fire (PD)====================================	ling Hixed Garden 1 Increase in** Total Productivity Value s=(Maxigum)=====(R	sting Hixed Garden 1 Increase in+* Total Productivity Value/Year ===(Maxiang)==== (Re)====
Economic Indicator Domestic Inflation Rate Foreign Inflation Rate	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	(Benefit) . Red Beans Maize Cassava	300	950 1.450 8,350	8888	(Benefit) 285,000 Red Beans 435,000 Maire 317,500 Cassava	(Benefit) Red Beans Maire Cassava	300 300	1 450 6, 350	5555 5555	285,000 435,000 317,500
interest mate (uenaing) Interest Rate (Saving) Exchange Rate per US\$ (Base Year 1932)	2,050	Albizia, tree Albizia, fire Jack Fruit Avocado	25,000 5,000 500	3.20 6.40 2.000	*	80,000 32,000 1,000,000	80,000 Albizia.tree 32,000 Albizia.fire 1,000,000 Jack Fruit	25,000 5,000 500	1. 60 3. 20 2. 000	* 	40,000 18,000 1,000,000
financing 	12, 0%	(note•) Total Benefits increase caused by Agricultural input Increase caused by Soil Conservation *	d by Asricu d by Soil (Total Benefits icultural Inpu Conservation	11 14 17 18 18 18	2, 149, 500 (note++) 0, 0% Increas 0, 0% Increas	arres 500 (note) 0.0% Increase caused by Agricultural Input . 0.0% Increase caused by Spil Conservation =	ed by Agric ed by Soil 1	ultural Input Conservation		2, 093, 590 0, 0 x 0, 0 x
- - - - -		(Cost) [Seeds] Red Beans Maize Cassava	1, 750 3, 500 3	40 3, 500	70 000 52 500 10, 500		(Cost) [Seeds] Red Beans Maize Cassava	1, 750 3, 500 3	3, 500 3, 500	79,000 52,500 10,560	
Discount Rate Total Investment Farmers' View Point	10.0 1 9.0 2	Albizia, tree Jack Fruit Avocado	1, 750	400 200 0	40,000 56,000		d Albizia. tree Jack Fruit	100	200	20, 000 50, 000	
Investment Cost Terrace(lst year)	0	Rertilizers) Manure Chemical	3	5,000 2, ty	types 250,000 150,000		No. of tree types = [Fertilizers] 50 Manure 50 Chemical 300	: types = 50 50 300	2 types 5,000 500	250, 000 150, 000	
Maintenance Cost(2nd yr) (after 2nd yr) Meintenance of Existing Terrace	20, 0% 10, 0%	uime [Pesticide] Gairan Butiran	20, 000 3, 000 3, 000	2 2 9 2 7 non	40, 000 40, 000 18, 000		urme : [Festicide] Galran Butiran	20, 000 3, 000	5 61 68	40,000 18,000	
Working Capital	10.05	[Labor] Labor Cost Crep and	3, 000	161	483, 000		[Labor] Labor Cost Crop and	3, 000	150	450,000	
With Project Without Project In-Use Value of Land	70.0% 70.0% 0	Vegetable Tree Maintenance and Harvesting	3, C00 sod	22 40,0% of	66,000 f costs		Vegetable Tree Maintenance and Harvesting	, 3, 000 נהל זכ	15 40.0% of	45,000 costs	
		[Others] Agricultural Equipaent	quipaent		50° 000		lutners] Agricultural Equipment	Iquipment		50,000	
				e z	机化分子 化甲基甲基甲基				***		

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Citarik Watershed Development Project

Change Pattern B Financial Analysis 1

Change from <Fithout Project> Existing Mixed Garden 2 to <fith Project> Forest 3

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ltem	Anuual B	Anuual Benefit and Cost (With Project) Forest ltem Base Year Base	Swith Project) Base Year Bu Price Du	ct> Forest 3 Base Inc Duantity Pro	3 Increase in* Total Productivity Value	[otal [tem Palme/Year	CWitho Base Y	<pre>Kithout Project) Base Year Base Drice Control</pre>	CWithout Project> Existing Mixed Garden Sase Year Base Increase in** Tota Price Denote: Denote: Vert	ting Mixed Gardon 2 Increase in** Total Productivity Veine	den 2 Total Vefet
111111111111111111111111111111111111111		*********	= (Kp) = = = = = = = = = = = = = = = = = = =	= (Kg. MJ) ===	(Maximum) ===	zzzzerezenene (R.) oszeret (R. M.) zzz (Natiwa) varz (R.) zzzzerezenenenene (R.) zere (R. M.) varzeret (R. M.) varzeret (R.) zzzz)	(d) erer==	(Xg. M3) === (H:	=== (=n= ; xa	== (Rp)
Economic Indicator		(Senefit) Bed Same	002	950	10	(Benefit) (Benefit) 245 non Padre	i ti	ant.	050		285
Domestic Inflation Rate	4D 8	Maize	300	1,450	6.0	435, D00 Maize	1		1. 450	0.0	435,000
Fortign Inflation Rate	5 Ct	Cassava.		6.350	10.0	317,500 Cassava D	_	20	6, 350		317.
Interest Rate (Saving)		Albizia. tree	25, 000	5, 50		140.000 AIbizia		5, 000	1.60		40.
Exchange Rate per US\$ (Rase Year 1992)	2, 050	Albizia, fire Jack Fruit Avocado	5,000 500 500	11.20		55,000 Albizia.fire 500,000 Jack Fruit 0		5,000	3, 20 1, 000		16.000 500.000
		(notes)		Total Renafite	22322223	reserver 1 733 500 (notee)	-			u	1 502 500
Interest Rate	12.0%	increase caused Increase caused	ed by Agric ed by Soil	by Agricultural Input = by Soil Conservation =		0, 0% Increi	sse caused	by Agricu by Soil C	0.0% Increase caused by Agricultural Input 0.0% Increase caused by Soil Conservation =		55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
		(Cost)				(Cost)					
		[Seeds] Red Beans	1.750	40	70,000	[Seeds] Red Bears) 80.5	1, 750	40	70, 008	
-		Maize Gassava	3, 500	15 3, 500	52, 500	Maize Gassaya		3, 500	15 3, 500	52, 500 10, 500	
Discount Rate		d Albizia, tree	6 0 I	550	85, 000	Albizia. tree	a. tree	100	150	15.000	
Total Investment Faraers' View Point	50.05 10.12	Jack Fruit Avocado			25, 000	Jack Fruit		250	100		
Investaent Cost		Ko. <i>of</i> tree [Fortilizers]	types =	2 ty	types	No. Iferti	No.of tree t	types =	2 types	53	
Terrace(1st year)	. 0	Manure Chemical	200	5,000	250,000	Manure Chemical	10	202	5,000	250,000 150,000	
	0	Line	250	1, 000	250, 000	Line		250	0	0	
Maintenance Costizna yr) (after 2nd yr)	20. UX	[Pesticide]		•		[Pesticide]	ide]		•		
Maintenance of Existing Terrace		Butiran	3, 000	1 120	18,000	e Calran Butiran		3, 000 3, 000	N 40	40, 030 18, 000	
	10.01	(Labor)				[Labor]					
Working Capital		Labor Cost Crop and	3, 000	181	483, 900	Laber Cost Crop and	ber Cost Crop and	3, 000	150	450,000	
Fith Project	70.05	Vegetable			100		Vegetable			000 10	
		Maintenance and	and	24	of costs	C. TRA	Maintenance and	5	40. Ör of	costs	
In-Use Value of Land		Karvesting [Others]	20			fothers	Harvesting [[s]				
		Agricultural Equipment	iquipment		50, 000	Agricu	Agricultural Equipment	Ipment	÷	50, 000	
		je	Total Evenue inve		1 515 000					1949222555555 1949225555555555555555555555555555555555	

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Citarik Watershed Development Project

Change Pattern C Financial Analysis 1

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Change from CWithout Project) Existing Mixed Garden 2 CMith Project? Agroforestry 2

Itea	Annual	Annual Benefit and Cost (With Project) Agroforestry lies Year Base Incre Prive Durative Produ	<pre><with ba="" base="" brice<="" pre="" project)="" year=""></with></pre>	t) Agrofores Base In Dusatity P:	t) Agroforestry 2 Base Increase in Total Dusatity Productivity Value/Year	Total Item Volue/Vear		<pre><without base="" but="" pre="" price<="" pro="" year=""></without></pre>	<pre>CWithout Project> Existing.Mixed Garden Base Year Base Increase in** Tota Parise Proventivity Vain</pre>	sting Mixed Garden 2 Increase in** Total Productiv(tv Value Veen	den 2 Cotal
一个有些,这些这些有些有些的情况。		инсонинский (Rp) инкилов (Ke. M3) пон (Moxinum) и ис (Rp) изими поналовинский (Rp) инкилов (Ke. M2) иск. (Maxibug) пина (Rp) инс.	(Bp) = e = = = = = = = = = = = = = = = = =	= (Kg. N3) ==	(Kaxiaum) ==	ar (Rp) ======		(Rp) == +== =	« (Kg. N3) === (Ma	x î buz) ===	8
		Red Beans	300	950	0.05	285.000 Rev	Ted Beans	300	035	0.02	28
VOBESTIC INTIATION RATE Foreign Inflation Rate Internet Deterion	5, 0% 5, 0%	Maize Cassava	<u> </u>	1. 150	555	435,000 Ma	Malte Cassava	200	1, 450 6, 350	583	317,500
Interest Rate (Saving)		Albizia. tree	25, 000	3.20	4 1 • 0	80, 000 AU	Albizia. tree	25, 000	1.50	5.0	4
Exchange Rate per USS (Base Year 1992)	2, 050	Albizia, fire Jack Fruit Avocado	500 500 500	6,40 1,000 1,250		32,000 AI 500,000 Ja 625,000	Albizia.fire Jack Fruit	5, 000 500	3.20		16,000 500,000 0
financing		(note*)	To	Total Benefits		2, 274, 500 (note+*)	ote++)				**************************************
Interest Rate	12. 0%	Increase caused by Agricultural Input - Increase caused by Soil Conservation =	id by Agric	ultural In Conservatio	22 t = 22		ACTESSE CAUSO ACTESSE CAUSO	id by Agric od by Soll	0.0% Increase caused by Agricultural Input = 0.0% Increase caused by Soil Conservation =		
		(Cost) [Seeds]		:		5) 5)	Cost) Seeds]				
		Red Beans Malze Cassava	2005	3, 500	70, 000 52, 500 10, 500	C W B	Red Beans Maize Cassava	3, 500 3, 500	40 15 3. 500	70, 000 52, 500 10, 500	
Discount Rate Total Investment	10.05	d Albizia, tree Jack fruit	100	200	20,000	Al Ja	y Albizis.tree Jack Fruit.	100 250	150 100	15,000 25,000	
farmers' Vicw Point	5. 0%	Avocado No. of tree	1,750 types =		175,000 types	ţ	No. of tree types =	types =	2 types	10	
Investigent Cost		[Fertilizers] Manure	50	5 000	250 000		[Fertilizers]	. 82		250 000	
Terrace(1st year)	00	Chenical	300	200	150,000	53	Chemical	300	005	150,000	
Maintenance Cost(2nd yr) (after 2nd yr)	20. 01 10. 01	[Pesticide]				; 8;	[Pesticide]				
Maintenance of Existing Terrace		cairan Butìran	3,000	7 60	18,000		earran Butiran	3, 000	-1 KD	18,000	
Working Capital	10.05	[Labor] Labor Cost		3		23	[Labor] Labor Cost		i		
With Project	70 0%	Grop and Vegetable	3, 000	101	483, UUU		Urop and Vegetable	3, 664	ne1	450, 060	
Without Project	70.0%	Tree Maintenance and	3,000 and	14 40.0% of	42,000 of costs		Tree Maintenance and	3.000 and	3 40.0% of •	27,000 costs	
In-Use Value of Land	0	Harvesting [Others]	1				Harvesting [Others]	54			
•		Agricultural Equipment	quipment		50, 000	89	Agricultural Equipment	quipment		50, 000	
				u	建立日本介绍等于世纪日本		•		****		

DRY1_F01:7

Citarik Watershed Development Project

Change Pattern D financial Analysis 1

Table 1:

1: Parameter Table									~	(per Ha)	
[ten	Annual Bo	Annual Benefit and Cost With Project> Forest 1 Item Dase Year Base Increase ine Total Price Quality Productivity Waive, Terresetarst(R) Research (AD) arec (Maxipagizere (R)	<pre><#ith Project Base Year B Price Caraal(Rp)=####################################</pre>	:t> Forest 1 Base Ir Quantity Pr	1 Increase ine Total Productivity Value/Year ===(Maxinu2)====(Nb=====		tea	<pre>Afithout Pr Base Year Price s== (Np) ===</pre>	<pre>"" "Althout Project> Dry Farming with Base Year Base Increase In- Price Quantity Productivity " == (Bo)====== (Ke.Mi3)=== (Basturne)</pre>	Farming with Terrace Increase in** Total Productivity Value/Year	Terrace Total Value/Year see (Bp)====
Economic Indicator Desetic Infinion Rate Foreign Infiniton Rate Interest Rate(Lending) Interest Rate(Saving)	80 KA 20 KA 20 KA	(Benefit) Red Beans Maize Upland Paddy Ground Muts Albizia, tree	300 300 300 25, 000	2, 850 1, 300 8, 50 8, 50	15. 0% 15. 0% 15. 0% 15. 0%		(Benefit) Upizná Paddy Maize Cassava Albizia, trec	300 300 50 25,000	2, 210 1, 450 6, 350 0, 00	10.05 10.05 10.05 10.05	729, 300 478, 500 349, 250 0
Exchange Rate per US\$ (Base Year 1992)	2, 050	Albizia.fire Jack Fruit Avocado	500 500 500		80,000	80,000	Albizia.fire Jack Fruit	5, 000	88 9 9 9 9	·	000
Financing Interest Rate	12, 0%	(note.) Total Benefits Increase caused by Agricultural Input : Increase caused by Soil Conservation =	Tc ed by Agric ed by Soil	Total Benefits icultural Inpu 1 Conservation		2.654,750 5.0% 10.0%	750 (note**) 5.0% Increase caused by Agricultural Input 10.0% Increase caused by Soil Conservation =	ised by Agr ised by Sol	licultural In; [Conservatio	. 4	1, 557, 050 1, 05 10, 05
	·	(Cost) [Seeds] Red Beans Malze Upland Paddy	3200 3200 31 31 31 31 31 31 31 31 31 31 31 31 31	886	52, 500 105, 000 26, 000		(Cost) [Seeds] Upland Paddy Maize Cassava	3, 500 3	40 3, 500	26,000 76,000 10,500	
Discount Rate Totai Investment Farmers' View Point	10.0X 9.0X	Ground Nuts Albizia, tree Jack Fruît Avocado	1, 500 250 1, 750	1, 000 1,	100, 000 100, 000 000 000		dibizia. tree Jack Fruit	100 250	09		
Maintenance of Existing Terrace In-use value of Terrace	(With Case) 425,000	No. of tree [fertilizers] Manure Chemical Liue	<i>3</i> .	1 1 10,000 1,000	types 500,000 180,000 250,000		No. of tree [Fertilizers] Manure Chemical Lime	se types * 50 300 250	3 20 20	0 types 00 250,000 00 150,000 0	
Maintenance Cost(Znd yr) (after Znd yr) Maintenance of Existing Terrace	10.0% 10.0% (Without Case)	[Pesticide] Cairan Butiran	20, 000 3, 000	204	80, 000 60, 000		[Pesticide] Cairen Butiren	20,000	2 10	40,000 30,000	
	10,0%	[Labor] Labor Cost Crop and	3.000	142	1, 023, 000		[Labor] Labor Cost Crop and	3, 000	200	609, 000	· ·
Fithout Project In-Use Value of Land	70.0% 0	Tree Maintenance and Maintenance and Marvesting	3,000 and Ag	35 40.0%	105,000 of costs		Tree Tree and Maintenance and Harvesting	. 3,000 e and ing	0 40 01	of costs	•
		Agricultural Equipment	Squipment		50, 000		Agricultural Equipment	Equipment		50, 000	
		ι Γ	Total Expenditure		2. 576. 500	·			и	1 796 SAA	· .

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Citarik Watershed Development Project

Change Pattern E Financial Analysis 1

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Ite Annual Barterit and Case Orick Forder Start Forders Ford Forders Ford Forders Ford Forders Ford Forders Ford	Farming with ferrace Increase in Total Productivity Value/Year (Navimum)	10.0% 729.300 10.0% 478.500 10.0% 349.250	e 	>= x = x = z = z = z = z = z 1.557,050 Dut = 0.03 Dut = 10.03	26, 000 70, 000 70, 500	00	types 250, 000 150, 000	40, 000 30, 000	500, 900	af costs	50° 000	11111111111111111111111111111111111111
Annual Benef ter tor (Lending) (Lending) (Saving) g2) USS 2.050 g2) g2) g2) g2) g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2	oject> Dry Fa Base I Quantity P e==(Kg. M3)===	2, 210 1, 450 5, 350	0.00 0.00 0.00	icultural Inp. 1 Conservatio	40 3, 500	ΘÓ	5,000 5,000 5,000 5,000					
Annual Benef ter tor (Lending) (Lending) (Saving	(Without Pr Base Year Price ====(Rp)====			aused by Agi aused by Soi			stee types " s] 50 300			iole 3,000 ice and sting	il Equipaent	
Annual Benef ter tor (Lending) (Lending) (Saving) g2) USS 2.050 g2) g2) g2) g2) g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2	Total Item Value/Year un (Ponnerver	448,500 Upland Padd 1,000,500 Maize 327,750 Cassava	80,000 Albizia.tre 32,000 Albizia.fir 750,000 Jack Fruit 1.250,000	4,486,759 (note++) 4,486,759 (note++) 5.0% increase o 10.0% increase o	(Coxt) [Seeds] Upiand Padd Maire Cassava	Albizia. tro Jack Fruit	Ro. of t [Fertillzer Manure Chamica]	Clac [Pesticide] Gairan Butiran	[Labor] Labor Cost Crop and	vegeta Tree Maintenar Narves	[Others] Agriculture	
Annual Benef ter tor (Lending) (Lending) (Saving) g2) USS 2.050 g2) g2) g2) g2) g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2	stry 1 Increase in• Productivity *=(Maximum) **	20 20 20 20 20 20 20 20 20 20 20 20 20 2		С Н Н Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц	26,000 105,000 52,500	45, 000 20, 000 100, 000 175, 000	types 500,000 180,000 500,000	80,000 80,000	1, 023, 900	έ	50, 000	2322222222222
Annual Benef ter tor (Lending) (Lending) (Saving) g2) USS 2.050 g2) g2) g2) g2) g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2 g2	st) Agrofore Base Quantity e== (Kg. M3)==	40		Total Benef Icultural In I Conservati			10.000 600					
tor tor tion Nate filon Nate (Lending) (Sawing) (S	Benefit and Cost (With Projec Item Base Year ====================================	~		se caused by se caused by		Ground Nuts 1,509 Albizia, tree 103 Jack Fruit 1,750 Avacado 1,750	Ho. of tree types r [fertilizers] 50 Manure Chemical 300	Lime [Pesticide] Gairan Butiran		setable enance and rvesting	[Others] Agricultural Equipment	4
Ites Economic Indiator Demestic Indiator Foreign Infiation Rate Foreign Infiation Rate Interest Rate per USS (Rase Year 1932) USS Financing Interest Rate Maintenance of Existing Te Maintenance Ost(20d yr) Maintenance Ost(2	Annual	ស ឆ បុះ បុះ ស អ	2. 050	12, 0%		10.01 9.01		ace		10°21		
	Поредиция Поредиция 11 поредиции 11 поредиции и поредиции 11 поредиции и поредиции	Convertion Indication Rate Domestic Inflation Rate Foreign Inflation Rate	Interest Rate (Saving) Exchange Rate per US\$ (Base Year 1992)	financing Interest Aate		Discount Rate Total Investment Farers' View Point	Waintenance of Existing Te in-use Value of Terrace	Maintenance Cost(2nd yr) (after 2nd yr) Maintenance of Existing Te	Working Capital	mith Project Without Project In-Use Value of Land		
			•									

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Citarik Watershed Development Project

Change Pattern F Financial Analysis 1

Change from CWithout Project> Dry Farming with Terrace to CWith Project> Dry Farming 1

1468	Annual Be	Annual Benefit and Cost (Mith Project) Dry Farming Incr Base Year Base Ver Base Yoar Base Price	Sase Year Price	cci/ ury ra Base Quantity	Tarming I Incre- Ly Product	ase in• T ctivity y	Productivity Value/Year	Item	Price	Year By Year By	ARLUNGUT FROJECCY DEY ZATEING WICH LEFTEC Base Year Base Increase in Tota Price Quantity Productivity Valu	Productivity	ierrace •• Total y Value/Year	Xear
Economic Indicator 	80 80 80	ennerereneers (Rp) (Senefit) Tomato Red Beans Waire		C 22 (Xg.) 0 5. 1 0 1. 6 1 4	26. M3) == * (Ma) 5. 156 1. 615 1. 450	xiaua)=== 15.0% 1 15.0% 1 15.0% 1 15.0% 1	== (Rp) ***= 1, 778, 667 557, 175 500, 250	= (Rp) ====================================	t) and y	200 300 300	=====================================	(Maximus) === 10, 05 10, 05 10, 05	(R) 123 124 124 125 123 123	(Rp)==== 723,300 478,500 349,250
Interest Rate(Lending) Interest Rate(Lending) Exchange Rate per US\$ (Base Year 1992)	2, 050	Albizia.tree Albizia.fire Jack Fruit Avocado	ណ៍ណ ស		00000			Albizia. tree Albizia. fire Jack Fruit	tree. Rire	25,000 5,000 5,000				
Financing Interest Rate	12.01	(note+) Increase caused by Increase caused by	66	Total Benefits Agricultural Input Soil Conservation =	enefits Input = vation =		======================================	a (note**) t increase t increase	e caused	by Agric by Soil	me=== 102 (note++) 5.0% Increase caused by Agricultural input 10.0% increase caused by Soil Conservation =	а 11 14	======================================	1, 557, 050 1, 557, 050 10, 02
	• .	(Cost) [Seeds] Tomato Red Beans Maize		000		75,000 52,500 52,500		(Cost) [Seeds] Upland Paddy Muize Cassava	addy	3, 500	40 3, 500	25,000 70,000 10,500	000	
Discount Rate Total Investment Farmre View Point	10.0% 2.0%	d Albizia.tree Jack Fruit Avorado	1, 100					0 Albizia.tree Jack Fruit	tre Ite	100	00		50	
errace	(With Case) 425,000	No.of tree [fertilizers] Manure Chemical Lime			type	s 500,000 180,000 000		No.of tre [Fertilizers] Manure Chemical Lime	f tree zers]	types = 300 250	0 ty 5,000 500 0	types 250,000 150,000 00	පුලුළු	
ce Cost(2nú yr) after 2nú yr) e of Existing Ter	10.0% 10.0% race (Without Case)	[Pesticide] Cairan Butiran	20,			80, 000 36, 000		[Pesticide] Cairan Butiran	5	20, 000 3, 000	102	40,000 30,000	22	
Working Capital	10.01	[Labor] Labor Cost Crop and	3, 600		325	875, 0 00		[Labor] Labor Cost Crop and	abor] isor Cost Crop and	3, 600	200	500, 00 <u>0</u>	. 8	
With Project Without Project In-Use Value of Land	35.04	Vegetable Tree Maintenance and Harvesting	able 3,000 sce and sting	- 	0.0% of o	costs 0	· · ·	Tree Veg Mainte Har	Vegetable Tree Maintenance and Harvesting	3,000	40. 0%.c	of costs	8	
		(Others) Agricultura	LOthers) Mgricultural Equipment			50, 000		Agricult	lothersj Agricultural Equipment	Ipment		20° 000	8	
			Total Excenditure	enditure	*****	**3275**********************************					ĸ	7.222222222222222222222222222222222222	10	

Change Pattern G

DRY2_F01 Gitarik Matershed Development Project Financial Analysis 1 Change from Kätthout Project> Dry Faraing without Terrace to Kmith Project> Forest 1

Item	Annual B	Annual Bonefit and Cost With Project) Forest 1 Annual Bonefit and Cost With Project) Forest 1 Recease in* Total Item Base Year Base Year Base Year Base Increase in* Total Price Quantity Productivity Majue/Year	<pre><with project=""> Base Year Bas Price</with></pre>	t) Forest 1 Base In Quantity Pr	1 Increase in* Productivity	Total. Item Value/Year	a Prij	CWithout Proje Base Year B	Without Project> Dry Farming without Terrace Case Year Base Increase in** Total Price Quantity, Productivity Value/Ye	araing without Terr Increase in** Total Productivity Value	To te
Economic Indicator		severate and a several (Benefit)	8352577 (dH);	(Kg. §J) #2#	23 (2012TX8W)	== (Kp) == == (3+	urrarreachean (Benefit)	(Kp) **** **	: = (Kg, MJ) = = = (X	18X 184 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
Domestic Inflation Rate	80 G	Upland Paddy Red Beans	000000000000000000000000000000000000000	1,300	1999 1999 1999	409,500 Uplan 299,250 Maize	ipland Paddy Iaize	002	2, 210	558 6 6 6	663, 000 435, 000
Interest Rate (Lending) Interest Rate (Lending) Interest Rate (SavIng)		Raize Ground Nuts Albizia, tree	800 800 25, 000	650 8.00	58 1.ú	546,000 AIb 200,000 AIb	uassava Albizia, tree	30 25, 000	00.0	5.0	
Exchange Rate per US\$ (Base Year 1992)	2, 050	Albizia, fire Jack Fruit Avocado	500 500 500	16. 00 0 0		80,000 AIb 0 Jac 0	Albizla, fire Jack Fruit	5,000	0.00		
Financing 	12. 0%	note*). Increase caused by Agricultural Newtits Increase caused by Soil Conservation 1	Tot td by Agricu td by Soil C	Total Benefits icultural Inpu 1 Conservation	аталастатататата 145 250 Арић - 0.03 160 - 0.03	====================================	te++) (crease cause (crease cause	d by Agrict d by Soil (==== 250 (note••) 5.0% increase ceused by Agricultural input ⇒ 1.0% increase ceused by Soil Conservation ≠		1.415.500 1.415.500 0.01
		(Cost)	•			55	(Cost)				
		Upland Paddy Red Btans Maize	550 1, 750 3, 500	900 04000	26, 000 52, 500 105, 000	Cas Cas	Loceus) Upland Paddy Maize Cassava	3, 500 3, 500 3	40 20 3. 500	26, 000 70, 000 10, 500	
Discount Rate Total Investment Faraare	10.05	Ground Nuts. Albizia. tree Jack Fruit		1, 000	145, 500	L A L A D A D	G Albizia, tree Jack Fruit	100 250	00	00	
Investment Cost	*	No. of tree ffertilizers]	\$, , ,	types	ſFe	No. of tree [Fertilizers]	types =	0 types	es	
Terrace(1st year) Subsidy	00	Manure Chemicél Lime	50 250	10,000 600 1,000	500, 000 180, 000 250, 000	Monu Chem Lipe	Manure Chemical Lime	300 250	5.000 500 0	250, 000 150, 000 0	
Maintenance Cost(2nd yr) Aeintenance Cost(2nd yr) Maintenance of Existing Terrace	20, 0%	[Pesticide] Cairan Butiran	20, 000 3, 000	50 4	80, 000 80, 000		[Pesticide] Cairan. Butiran	20,000 3,000	10 2	40, 000 30, 000	
Porking Capital	0.0%	[Labor] Labor Cost	000 6	176	1 023 000	33`	(Labor) Labor Cost		006	000 008	
With Project Without Project	35.05	Vegotable Tree Maintenance and	3,000 and 3,000	24	105,000 of costs		Vegetable Tree Maintenance and		40.0% of	ü	
	2	narvesting [Others] Agricultural Equipment	g uipment		50,000	0] Y2	narvesting [Others] Agricultura! Equipment	s quìpment	·	20,030	
					********				141		

DR2AG1DK: S

Citarik Watershed Development Project financial Analysis 1

Change Pattern H

Change from <#ithout Project> Dry Faraing without Terrace to <#ith Project> Agroforestry 1 with Dike Terrace

Item Economic Indicator Economic Indicator Domestic Inflation Rate Foreign Inflation Rate Interest Rate (Lending)	Annual Benef 8.0 1 5.0 5	Annual Benefit and Cost (With Project) Agroforeatry 1 with Dike Terrace (Withou Date Year Base Year Base Increase in Total Iten Base Y Price Price Quantity Productivity Walley'Fear Price (Rp) Commensation (Rp)======(Rg, W3)== (Maximus)====(Rp) (Random (Rp)======(Rp)	th Project> e Year Ba	Agroforestr se incr stity Prod	y 1 with Di case in* To	ke Terrac tal	g	CWithout Proje Base Year Ba	р.,	ng without	Terrace otal
n Sate - Rate ding)	100 100 100 100	Prio Regeneration (Regeneration	ė	antity Prod						DCTCRSC 10.	
n Rate Rate ding)	40 40 40	(Renefit)	(Bu) = searce	(Ko W3) == (N	uctivity Va aviantity va	(Po) Esses	L L L L L L L L L L L L L L L L L L L	(Ru)aureer	Quantity Productivit Hassess(Ko M3)see(Maximum)	Productivity V se(Maximum)====	alue/Year = (Ro) == ==
n Rate Rate ding)	3. 0# 5. 0%		Lange of the second sec	W			(Benefit)		the second se	1004400	
. ·:	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	ddy	200	1, 300	12°.05		Upland Paddy	300	2, 210	방원 공공	563, 000
		cans	300	056		327, 750 M	Meize	0.02	1, 450	10 10	635, 01
Interest Rate (Lending)				2. 500		000,500 0	assava	20	6, 350	50.0	317.5
			800	850		538,000				0. 03	
Interest Rate(Saving)			25, 000	3. 20		80,000 A	libizia. tree	Z2, 000	0. 00		
		7.012 223. 717C				1 000 170	ant Ervit		20.2		
EXCHENSE MALE DEF UGA 2,4 (Rase Year 1993)	6, UOU	Averado	200	2,500	1	250, 000	1. 250, 000	200	3		
				***						1	21233222
Financing		(note+)		Total Benefits		4,485,750 (note**)	(noter+)				1, 415, 500
Interest Rate	12.0%	Increase caused by Agricultural Input Increase caused by Soil Conservation	d by Agricu d by Soil C	cultural Input Conservation	н . я	22	5.0% increase caused by Agricultural input .0.0% increase caused by Soil Conservation =	ed by Agric ed by Soil	ultural input Conservation =	н	56
		(Cost)				-	(Cost)				• •
		[Seeds]					[Seeds]				
		Upland Paddy	220	9	26,000		Upland Paddy	650	Ş	26,000	
-		Red Beans	1.750	81	22, 500		第3126	3, 300	22	/0. 000	
		Maize Ground Wite	3, 500	25	105, 000	-	Cassava D	מי	3, 300	10. 500	
Disconnt Rate		Albizia, tree	100	200	20,000	-	Albizia, tree	100	0	Ģ	
	10.0%	Jack Fruit	1, 000	100	100, 000		Jack Fruit	250	0	0	
Farmers' View Point	9. CK	Avocado	1.750	100	175,000						
Tourscherch Part		No. of tree	types =	3 types	5		No.of tree types = [Fretifizers]	types =	U TYPES	2	
		Manure	50	10, 000	500.000	-	Manure	20	5, 000	250,000	
Dike Terrace (1st year) 330, 000	000	Chemical Lima	2005	003	180, 000		Chemics! Lime	300	200	150, 000	
Maintenance Cost(2nd yr). 21	20. 0%							1	I		

2, 711, 500

Tots! Expenditure

50, 000

50, 000

40, 000 30, 000

~2

20, 000 3, 000

[Pesticide] Cairan Butiran

80, 000 \$0, 000

78

20,000

[Pesticide] Cairan Butiran

20. 0% 10. 0%

Maintenance Cost(2nd yr) (after 2nd yr)

600, 000

200

0 40.05 of costs

[labor] Labor Cost Crop and Yegrable 3,000 Maintnance and Harvesing Cothers] Agricultural Equipment

341 1.023,000 15 45,000 40.0% of costs

[Labor] Lebor Gast Crop and Vesetable 3,000 Tree 3,000 Maintenance and Harvesting Cothersi Sciutural Equipment

35. 0% 70. 0%

Torking Capital Nith Project

0

In-Use Value of Land

0.0\$

Maintenance of Existing Terrace

DR2AG1BE:8

Citarik Watershed Development Project

Change Pattern I Finencial Analysis 1

Change from CWithout Project> Dry Farming without Terrace to CWIth Project> Agroforestry 1 with Bench Terrace

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Itea	1.000	Annual Benefit and Cost With Project? Agroforestry 1 with Beach Terrae asserver Basery Increase in-Total Price, Basery Proguetivity Value/Year	<pre><with project=""> Base Year Base Price Qu</with></pre>	> Agroforestry l ⊭ith Bench Terra Base Increase in• Total Qumptity, Productivity Value/Year	stry l with Bench Te Increase in* Total Productivity Value/	ach Terra otal alue/Year	race Ang Item Base ar	AWithout Prej Base Year B Price Q	CWithout Project> Dry Farming without Terrace Base Year Base Increase in Total Price Quantity, Productivity Value/Ye	arming without Terr Increase in ** Total Productivity Value	Terrace Total Value/Year
Economic Indicator		(Benefit) (Benefit) Maria and the second of the second second second by a second second and the second second second second second	(kp) *******	- 200		235=(dH)=:	(Benefit)	222222 (dH)		ac o ac o	
Domestic Inflation Rate Foreign Inflation Rate	8, 05 5, 05	Uptang ragey Red Beans Maize		2, 900 2, 900	15.05 1.0	327, 750 Maize	uprang raudy Maize Cossava		1, 450 6, 350	588	435,000
		Ground Nuts Albizia, tree	25,000	3.20	15. 01	598,000 80,000	Albizia tree	25,000	0.00	0, 0%	
Exchange Rate per US\$ (Base Year 1992)	2, 050	Auntala, Life Jack Fruit Avocado	200	1, 500 2, 500		750,000	750,000 Jack Fruit	200	0		
Financing Interest Rate	12. 02	(note*) Total Benefits " increase caused by Agricultural input v increase caused by Soil Conservation =	I by Agricu by Scil C	<pre>fotal Benefits cultural Input Conservation</pre>	3 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	*4,486,750 (note++) 4,486,750 (note++) 5.0% Increas 10.0% Increas	r==== 200 (note++) 5.0% Increase caused by Agricultural Input = 10.0% Increase caused by Soll Conservation ≖	d by Agric d by Soll	ultural Input Conservation		1,415,500 1,415,500 0,01
•		(Cost) (Seeds)					(Cost)				
		Upland Paddy Red Beans	650 1.750	3040	26,000 52,500		Upland Paddy Maize	3, 500	40 20	26,000	
		Maize Ground Nuts	3, 500	88	105,000		Cossava D	••	3, 500	10, 500	
Discount Rate Total Investment Formon Visco Deset	10.05	Albizia, tree Jack Fruit	1. 000	100	20, 000		Aibizia.tree Jack Fruit	100	00	00	
rapació taga fulli. Terreteren Alert	*n "n		types =		types		No. of tree types =	types =	0 types	65	
		Kanurc Kanurc	20	10, 000	500, 000		Manure	20	5, 000	250, 300	
Bench Terrace(1st year)	520,000	Chemical Lime	300	600	180, 000 250, 000		Chemical Lime	300 250	200	150,000	
Maintenance Cost(2nd yr) (after 2nd yr)	20, 0% 10, 0%	[Pesticide]					[Pesticide]				
Maintenance of Existing Terrace		Gairan Butiran	3, 000	20	50, 000 60, 000		Carran Butiran	3, 000	10	30,000	
Working Capital	0,04	[Labor] Labor Cost					[Labor] Labor Cost			000 000	
With Project	35.0%	urop and Vegetable	1, UUG	140	7.020 COD		vrop anu Vegetable	o, uuu	0.07	000' 000	
Without Project	70, 01	Tree Maintenance and	3,000 nd	15 40.0% o	45,000 of costs	-	Tree Maintenance and	3.000 nd:	0 40.0% of costs	costs 0	
In-Use Value of Land	0	Harvesting Cottones					Harvesting				

1, 226, 500

Total Expenditure 2, 711, 500

DR2DRBEC:11

Citarik Matershed Development Project Financial Analysis 1 Change from KWithout Project> Dry Farming without Terrace to KWith Project> Dry Farming with Bench Terrace

Mathe R. (1) Mathe Math Math Mathe	Itei		Item Base Year Base Increase in• Total Price guestity Productity Malue/Year 	Year B	Base]; Quantity P; ar(Ye M7) we	Increase in• Total Productivity Value	Total Value/Yea value/Yea	Item Bar r 	Base Year I Price (Base Incr Quantity Produce act(Xe M3) ==== (M	Increase in** Total Productivity Value/Year tre(Mavimum)=====(Rn)====	Total Value/
Of Nation Size	Economic Indicator		(Benefit)	006	1 1 5 5		110 261	(Benefit)	100	010 6	0.04	1 4 4
2.150 Albiria free 2,000 0.00 0.00 0.00 0.00 0.00 2.150 Jack Fruit 5,000 0.00 0.00 0.00 0.00 0.00 2.151 Jack Fruit 5,000 0.00 0.00 0.00 0.00 0.00 112.13 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 12.13.14 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 12.14 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 12.15 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 12.15 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 Increase caused by Arrival input 10.01 increase caused by Arrival input 5,000 0.00 0.00 Increase caused by Arrival input 10.01 increase caused by Arrival input 0.01 increase caused by Arrival input 0.00 Increase caused by Arrival input 10.00 increase caused by Arrival input 0.00 0.00 0.00 <	Domestic inflation Rate Foreign Inflation Rate	8, 0% 5, 0%	lomato Red Beans Maize		1, 615		500, 250	talia Cassava	200	1.450 6,350		435,000
2.050 Jack Fruit (100) 000 0 Jack Fruit (100) 000 12.05 Jack Fruit (100) 0 0 Jack Fruit (100) 000 0 12.05 Jack Fruit (100) 0 0 Jack Fruit (100) 0 0 0 12.05 Jack Fruit (100) 0 0 75.00 10.05 (acest) 5.00 25.00 0 25.00 20.00 20.00 20.00 20.00 20.00 0 <td< td=""><td>interest Mate (Lenging) Interest Rate (Saving)</td><td></td><td></td><td>25, 000 5 000</td><td>0.00 0.00</td><td></td><td></td><td>Albizia, tree Athizia, fire</td><td>25,000 5,000</td><td>0,00</td><td>* D * D</td><td></td></td<>	interest Mate (Lenging) Interest Rate (Saving)			25, 000 5 000	0.00 0.00			Albizia, tree Athizia, fire	25,000 5,000	0,00	* D * D	
12. CX [note*] Total Benefits 2.335, 92 (note*) 12. CX Increase caused by Scil Conservation = 10. K 5.0% [norease caused by Scil Conservation = 12. CX Increase caused by Scil Conservation = 10. K 5.0% [norease caused by Scil Conservation = 13. Cx Cost 1 5.0% [norease caused by Scil Conservation = 10. K 10. Cx Cost 1 5.000 [stress caused by Scil Conservation = 10. K 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 10. Cx 1	Exchange Rate per US\$ (Base Year 1992)	2,050		200				Jack Fruit	200	0		
12.13* Increase caused by Soil Conservation = 10.0% Increase caused by Soil Conservation = 12.13* Increase caused by Soil Conservation = 10.0% Increase caused by Soil Conservation = 12.14* Increase caused by Soil Conservation = 10.0% Increase caused by Soil Conservation = 13.15 Interact 1.500 10	Financing		se caused	To by Agricu	tal Benefi ltural Inp		2.835.092	<pre>[(note**) % Increase caus</pre>	ed by Agri	cultural input	n	1,415,500
(Cost) (Cos) (Cost) (Cost)	Interest Rate	12.0%	Increase caused	by Soil C	onservatio	u	10.0	% Increase caus	ed by Soil	Conservation =		
10.0% 10.0% 1.500 0 0 1.500 0 0 0 3.550 0 <td< td=""><td></td><td></td><td></td><td>7.500</td><td></td><td>75,000</td><td></td><td>(Cost) (Seeds) Upland Paddy</td><td>650</td><td>55</td><td>25,000</td><td></td></td<>				7.500		75,000		(Cost) (Seeds) Upland Paddy	650	5 5	25,000	
10.0% Mibiria.tre 1.000 0 0 0 0 0 10.0% Jack Fruit 1.000 0 0 0 0 0 0 10.0% No.of free types = 0 0 0 0 0 0 0 0 20.0% Kanute 1.000 0 0 0 0 0 0 0 520,000 Effectilizers1 50 500 00 0 0 0 0 520,000 Effectilizers1 50 500 00 0 0 0 0 10.0% Effectilizers1 50 0 0 0 0 0 0 10.0% Effectilizers1 20 00 180,000 Minute 200 500 10.0% Effectilizers1 20,000 180,000 0 0 200 500 10.0% Effectilizers1 20,000 12 30.000 100 200 200 10.0% Effectilizers1 20,000 12 30.000 2140 200 200 10.0% Effectilizers1 20,000 12 30.000 200 200 200				3, 500		22, 500		Cassava .	o. outo 3	3, 500	10.500	
Mo. of tree types 0 Wo. of tree types 0 520,000 Efertilizers1 300 600,000 Manure 50 50 520,000 Efertilizers1 300 600,000 Manure 50 50 70,01 Efertilizers1 300 600,000 Manure 300 50 70,01 Efectilizers1 300 600 10.000 Efectilizers1 300 70,01 Efecticize1 250 0 10.000 Effecticize1 250 50 70,01 Effecticize1 20,000 12 36,000 0 10 26 70,01 Effecticize1 20,000 12 36,000 201 20 200 70,01 Effecticize1 20,000 12 36,000 201 20 200 70,01 Effect cost 36,000 21 3,000 200 200 70,02 Effect cost 36,000 23 975,000 14abor1 14abor1 70,03 Tere 3,000 25 975,000 14abor2 200 200 70,03 Tere 3,000 25 975,000 14abor2 200 200 70,03 <td>Discount Rate Jotal Investment</td> <td>10.05</td> <td></td> <td>1.100</td> <td></td> <td></td> <td></td> <td>Albizia, tree Jack Fruit</td> <td>250</td> <td>50</td> <td>00</td> <td></td>	Discount Rate Jotal Investment	10.05		1.100				Albizia, tree Jack Fruit	250	50	00	
520.000 Manure Chemical 500 500 600 600 600 600 500	TOTACTS FLOW TOTAL		of tree	.pes =		ypes		No. of tree	types =	0 type	\$	
ost(2nd yr) 20.03 0.03 [resticide] 20.000 20 r 2nd yr) 10.05 [resticide] 20.000 20 Cairan 3,000 12 36.000 20 20 Distant 3,000 12 36.000 20 20 Distant 3,000 12 36.000 20 20 Distant 0.05 [Labor] 1.05 [Labor] 2.000 200 Distant 3,000 12 37.000 20 20 200 Distant 0.05 1.05 1.05 1.05 2.000 200 Distant 3,000 12 37.000 200 200 200 Distant 3,000 12 37.000 1.05 200 200 Distant 3,000 0 0 700 1.05 200 200 Distant 0.07 0 0 0 1.05 1.05 1.05 1.05 Distant 0.03 0 0 0 0 1.05 1.05 Coro and 0 0 0 0 0 1.05 1.05 Sidetent 0 0 0	and the second work and a second second second second second (1st year)	520, 000	Manure Chemical	000000000000000000000000000000000000000	10, 000 600	500, 000 180, 000		Manure Chezical	300	5,000 500	250,000 150,000	
Kisting Terrace Durition 20,000 12 30,000 14 20,000 10 0.0X Ulabor 0.0X 0.00 200 200 200 0.0 0	Maintenance Cost(2nd yr) (after 2nd yr)	20.01	[Pesticide]	nn 400 80	.			[Pesticide]	001 VU			
0.03 [Labor Gost [Labor Gost 0.03 [Labor Gost 3.000 325 0.03 0 0 1.000 200 0.03 0 0 0 1.000 200 0.03 0.03 70.03 1.000 200 0 0.03 0 0 0 1.000 0 0 0.03 0 0 0 40.03 1 and 0 0 0 1.000 40.03 1 and 0 0 0 1.000 40.03 1 and 0 0.03 0.000 0 1.000 1 and 0 0.03 0.000 0.03 1.000 1 and 0 0.03 0.000 0.000 0.000	Maintenance of Existing Terrac	40	uaren Butiran	3, 000	12	36,000	-	carran Butiran	3, 000	10 4	30,000	
35.05 5.000 3.000 3.000 2.000 0 0 1.1 <th1.1< th=""> <th1.1< th=""></th1.1<></th1.1<>	Working Capital	0. 01	[Labor] Labor Cost	÷			 .: .	[Labor] Labor Cost	:			
reject 70.0% Tree 3.000 0 0 1 free 3.000 0 0 costs Haintenence and 40.0% of costs Haintenence and 40.0% costs Hairtenence and 40.0% costs Hair	With Project	35.0%	Crop and Vegetable	3, 000	325	975, OUC		Crop and Vegetable		200	600, 000	
e of Land U (Others)	Fithout Project	70.0%	Tree Maintenance and		40.0%	of costs		Tree Maintenance	3.000 and	40.0% of	costs	
	The value of Loss values	5	narvesting (Others) Agricultural Equi	ipment	•	50, 000		[0thers] [0thers] Agricultural	ns Equipment	· · · · · · · · · · · · · · · · · · ·	50, 000	
		:	· · ·			***********				U AU		

DR2DYNOT:12

Citarik Watershed Developaent Project Financial Analysis 1

Change Pattern K Change from «Without Project> Dry Farsing without Terrace to «With Project> Dry Farsing without Terrace

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Table 1:

Iten	Innak	Annual Benefit and Cost (With Project) Dry Faming without 1 Base from Base from Dase inv Therease inv 1 Price Quantity Productivity V	<with project<br="">Base Year B Price 9</with>	tt> Dry Farmir Base Inc Quantity Pro	<pre>t> Dry Farming without Terrace Base increase in* Total Quantity Productivity Value/Year</pre>	lerrace lotal It Value/Year	Itea	<pre><without b="" base="" pre="" price="" proj="" q<="" year=""></without></pre>	<pre>(%ithout Project) Dry Farming without 8ase Year Base Price Quantity Productivity</pre>	arming without Increase in++ Productivity	t Terrace Total Value/Year
assessessansesses Econosci indicator Domestic Inflation Rate Foreign Inflation Rate	8.05 5.05		(Rp) ***** 300 300	= (Kg. M3) === 1 5, 156 1, 615 1, 450	(Haximus) === 5, 0% == 5, 0% ==		encennennene (Senefit) Upland Paddy Maize Cassava	.= (Rp) - = = = = 300 300 50	== (Kg. M3) =≠±≠() 2,210 1.450 8,350	Maxiaum) = = = 0.04 0.03 0.04 0.04	== (Rp) ==== 663, 000 435, 000 317, 500
Interest Mate (Lending) Interest Mate (Saving) Exchange Mate per US\$ (Bese Year 1992)	2, 050	Albizia, tree Albizia, fire Jack fruit Avocado	25, 000 5, 000 5, 000 500	66600	5 0 3	0 0 0 AI	Albizia, tree Albizia, fire Jack Fruit	25,000 5,000 500	0.00 0.00 0	8 4 ·	69995
Financing 	12.0%	(note*) Total Benefits Increase caused by Agricultural Input Increase caused by Soil Conservation =	d by Agric	Total Benefits Icultural Inpud 1 Conservation	1) 14 14 14	zacatorenera 2.589,475 (note+*) 5.0% increas 0.0% increas	475 (note++) 5.0% increase caused 0.0% increase caused	sed by Agric sed by Soil	by Agricuitural Input by Soil Conservation	• .	1.415,500 0.05 0.05
	• *	(Cost) [Seeds] Tomato Red Beens Maize	7, 500	12910	75, 000 52, 500 52, 500	222280 222	(Cost) [Seeds] Upland Paddy Maire Cassava	3,500	3, 500 3, 500	26, 000 70, 000 10, 500	
Discount Rate. Total Investment Farmers' View Point	10, 01 9, 05	Albizia. tree Jack Fruit Avecado	1,000		9000	2°.	Albizia.tree Jack Fruit	100 250	00	00	
Investment Cost		No. of tree [Fertilizers]	types =		types	5,	No. of tree types = [Fertilizers]	e types =	0 types	ses	
Terrace (1st year)		Manure Chemical Lime	300	10,000 500	500, 800 180, 800	#83	Manure Chemical Lime	300	5, 000 500	250,000 150,000	
Maintenance Cost(Znd yr) (after 2nd yr)	20. 0% 10. 0%	[Pesticide] Calran	20,000	১ প্য	80,000	, .	[Pesticide] Cairan	20,000		40, 000	·
Maintenance of Existing Terrace	0.03	Butiran [Labor]	3, 000	12	35, 000	a 0	Butiran [Labor]	3, 000	2	30, 000	
Working Capital		Labor Cost Crop and	3, 000	325	975.000	E.	Labor Cost Crop and	3, 000	200	606, 000	
With Project Without Project	35.0%	Vegetable Tree	3, 800				Vegetable Tree	3,000	0		
In-Use Value of Land	0	maintenance and Marvesting [Others]	and S	40.0%	01 005 15	يت	Maintenance and Harvesting [Others]	Due .	40.04 01	8	
		Agricultural Equipment	quipment		50,000	Ŷ	Agricultural Equipment	Equipment		50, 0 <u>0</u> 0	
		,			*******				5 1		

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SHR_F01:13

Change Pattern L Citarik Watershed Development Froject Economic Analysis 1

Change from (Without Project) Shrub, Grass Land, Quarry to (With Project) Forest I

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	40004	Acons Provide Astrony Cost (With During Long)	(to Due lact)	Corner 1			2	1 thout Dea	Larth Cherk	(Bithout Project) Shauk Gree Land	Or a r r c
[tem:	1 points	Deneric and cost Nn. Item Ba	Price Year Ba	Base Incl Quantity Proc	increase in* Total Productivity Value	otal 'alue/Year	t and vost chur troject. Fortes in Total Itan 3855 tear 1855 tea 855 tear 3556 Instease in Total Itan 3855 tear Price Quantity Productivity Value/Vear Price	Price	Base Quantity	Incresse in Productivity	Total Value/Year
化合作用化作用化作用化合作的 化合合合合合合合合合合合合合合合合合合合合合合合合合合合合合合合合合合		1111111111111111111111111111111111111	= { { { { { { { { } { } { } } } } } = = = =	(Xg, NJ) === ()	une (Chat XeW	а (Нр) тат	ssessesses (territit)	==== (dH) ==	ece (Kg. X3) =:	ана (Kg. Kg) наа (Nex Jenu) нааса (Kb) жана	:=== (KD) =
		Upland Paddy	300	1, 300	5.0%	409, 500 1		300	0	0.03	
Domestic Inflation Rate	8. 01	Red Beans	300	950	5, 05	299, 250	Maize	300	0	0.0	
Foreign Inflation Rate	5.0%	Maize	300	2, 900		913, 500	Cassava	20	•	-0 -0 -0	
Interest Mate (Saving)		Albizia, tree	25,000	8, 00 8	* ^ *	200, 000 /	Albizia. tree	25, 000	0.00		
		Albizia. fire	5, 000	15.00	•	80,000	Albizia. fire	5, 000	0.00		
Exchange Rate per USS (Base Year 1992)	2, 050	Jack Fruit ' Avocado	200				Jack Fruit	Nuc	Ð		
Financing		(note.)	Tot	Total Benefits		2, 448, 250 (note**)	(note++)			-	
Interest Bate	12.02	Increase caused by Increase caused by	ncrease caused by Agricultural input nerease caused by Soil Conservation =	Agricultural Input Soil Conservation	" "	* 10 * 10	5.UX increase caused by D.DX increase caused by	sed by Agri ed by Soil	Agriculturel input Soil Conservation -		
										1	•
		(Cost)					(Cost)				
		CCCCCS Dodde	6 CD		000 24		[Secos] Volad Paddy	55D	c	c	
		UPIZIU FAULY Red Reare	1 750	05	52, 500		Waize source Maize .	3, 500	• •	90	
		Maize	3,500		105,000		Cassava	5	•••	.0	
		Ground Nuts	1, 500	8	45,000		0	•	•	•	
Discount Rate		Albizia tree	100	1.000	100,000		Albizia. tree	1001	0		
lotai investment Correcto di Allociot	10, 42	Jack Fruit	000		b c		Jack truit	250	D	•	
	1 . C	Avocauo No. of tree	types =	l types			No. of tree	e types *	9	types	
Investment Cost		[Fertilizers]					[fertilizers]			•	
//////////////////////////////////////	c	Menure Traitel	20	10,000	500, 000				Ċ		
Subsidy			200	1. 860	250.000		Line	250		- -	
Maintenance Cost(2nd yr)	20.01					•				1.	
(after 2nd yr)	10.0%	[Pesticide]				•	[Pesticide]				
		Calran	20, 000	1	80, 900		Cairan	20, 000		0	
Haintenance of Existing Terrace		Butiran	3, 000	20	60, 000		Buttran	1000 °E		Ð	
	Q. 01	[Labor]					[Labor]				
Working Capital		Labor Cost				÷	Labor Cost		•	:	
	30 16	Crop and	3, 000	341	1,025,000		Crop and	3, 000			
Without Project	i ti iç di	Tree	3, 000	55	105, 000		Tree	. 3, 600			•
		Maintenance and	and	40.0% of	f costs		Maintenance and	sud .	40.0%	of costs	
In-Use Value of Land	Ð	fatvesting record	30	•			Harvesting	2 2			
		tuteraj Avricuitural Fouloment	four Losen t		50,000		tructs) Arricultural Fouloment	Eauinment		c	
	÷	Ē	Tatal Rumanditues		100 242 4						н
		4	CLEI EXPENDE		nne 'n / e 's					>	

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660 66 Table 1:Parameter Table(per Ha)Table 1:Parameter Table(Formatter Table)(Formatter Table)IteaAnnual Benefit and Cost (With Project) Agroforestry 1 without Terrace(Without Project) Grass LandIteaBase Year BaseIncrease in TotalProject) Grass LandIteaBase Year BaseIncrease in TotalProdectivity Value/YearEconomic IndicatorConomic Indicator(Walkuu)===(Ka, M)==(Ka, M)== -------------0 40.0% of costs 4.280,250 (note++) 4.280,500 (note++) 5.0% Increase caused by Agricultural Input = 0.0% Increase caused by Soil Conservation = 0 types o 000 00 000 00 ... 23. No. of tree types = Manure Chemical Lime Tree 3,000 Maintenance and Maryesting [Others] Asricultural Equipment 3, 000 3, 500 20, 000 3, 000 tia. [Labor] Labor Cost Crop and Vegctable * (Cost) [Seeds] Upland Paddy Malize Cassava Albizia.tree Jack Fruit [Pesticide] Gairan Butiran 2, 711, 500 50, 000 25,000 52,500 45,000 45,000 175,000 175,000 175,000 500, 000 180, 000 250, 000 80, 000 60, 000 341 1,023,000 15 45,000 40.0% of costs (note*) Tatal Benefits Increase caused by Agricultural Input = Increase caused by Soil Conservation = 46 30 30 200 100 100 100 175 3 types 10, 000 600 1, 000 48 Total Expenditure [Labor] Labor Cost Crop and 3,000 Vegetable (Cost) (Cost) Upland Paddy 550 Upland Paddy 550 Maire Maire Abbrais, tree 1, 500 Jack Fruit 1, 500 Avorado 1, 500 Avorado 1, 500 Mo of tree types = Tree 3,000 Maintenance and Karvesting [Others] Squipment Agricultural Equipment 20,000 300 250 [Pesticide] Manure Chemical Lime Gairan Butiran 10.01 20.02 20.01 10.01 35. 03 0. 02 12.02 0.03 0 Ģ ----Maintenance of Existing Terrace Maintenance Cost(2nd yr) (after 2nd yr) Discount Rate Total Investment Farmers' View Point In-Use Value of Land Terrace(1st year) Working Capital With Project Without Project Financing Interest Rate Investment Cost

AGROINOT: 14.

Citarik Watershed Development Project

Financial Analysis 1

Change Pattern M Change from (Without Project) Grass Land to (With Project) Agroforestry 1 without Terrace

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Citarik Fatershed Development Project (2) Calculation Example of Estimated Incremental NPV

DR2AG1BE:8

Financial Analysis 1 – Change from Dry Farming without Termace to Agroforestry 1 with Bench Terrance – Constant Analysis Arrodocts Dry Faraing without Terrace (and the Project Agroforestry 1 with Bench Terrance – Change free (Rith Project) Agroforestry 1 with Bench Terrace

Table 1

	Annual	Annual Benefit and Cost (With Project) Agroforestry 1 with Bench Terrace	ith Project>	Agroforestry	1 with Be	nch Terrao		Without Proj	Dry Fa	ng vithout	Terrace
1.55 2 2.474 - 4,344 - 4,444 - 4,444 - 4,444		ικα σανακτικαι που που πιστοπου μη του το το που που που που που που που του το τ Price Quantity Productivity Value/Year πατανασκατειατάβολακταταν (Κρ.Μ.) τατ (Μομάμαμα) τατά (Μομάμα) τατα (Μομάμα) τατα (Μομάμα) τατα (Μομάμα) τατα τ	разстеаг ра Price QU анг (RD) = жиники	oase Increase In local Quantity Productivity Value/Year #*(Kg.M3)====(Naximum)====(Ro)=====	nerease in total Productivity Value/ **(Maximum)====(RD)	alue/Year alue/Year = (Ro) =====		Price Cur D	Quantity Prod (uantity Prod mus(Kg. H3) sname (H	roductivity V *roductivity V * (Maximum) ====	totai Value∕Ycar =={Ro}====
Economic Indicator		(Benefit) Noised Paddy	300	300.1	15.05	448 500 1	(Benefit) Unland Paddy	300	0 1 C	2	663 000
Domestic Inflation Rate Foreign Inflation Rate	tte 8,0% ce 5,0%	Red Brans Maize		350	888	227.750	Malze Cassava	200	6, 350	888	435, 600
Exchange Rate per US\$ (Base Year 1992)	2, 050	Ground Mucs Albizia, tree Albizia, fire Jack Fruit Avocado	25, 000 5, 000 5,0000 5,00000000	3, 20 3, 20 6, 40 2, 500	1	32,000 / 32,000 / 32,000 / 750,000 /	550,000 Albizis.tree 50,000 Albizis.fire 32,000 Jack Fruit 1,250,000 Jack Fruit	25, 000 5, 000 500	0, 00 0, 00 0	1 0	
Financing	12.03	(note*) increase caused by Increase caused by	fot ed by Asricul ed by Soil Co	Total Benefits Agricultural Input = Soil Conservation =		4,436,750 (note++) 5,05 Increas 10,05 Increas	note••) Increase cau Increase cau	sed by Agric sed by Soil	ressa 5.0% [norease caused by Agricultural Input 5.0% [norease caused by Soil Conservation ≖ 10.0% [norease caused by Soil Conservation ≖	n 0	1.415.500 1.415.500 0.05
		(Cost) [Seeds] Upland Paddy Red Beans Maize	1, 750 3, 500	999 999 999	26, 000 52, 500 105, 000		(Cost) [Seeds] Jpland Paddy Maize Cassave	3 550 3	3, 500	26,000 70,000 10,500	
Discount Rate Total Investment		Ground Nuts Albízía, tree Jack Fruit		30 100 1100	45,000 20,000 100,000		0 Albízía, tree Jack Fruit	100 250	99	00	
Farects ties round Investment Cost	400.00	No. of tree types = [Fertilizers]	types =	3 types	51 mm		Mo.of tree [Fertilizers]	types =	0 types	e tr	
Bench Terrace (1st year)	ar) 520, 000	Manure Chemical	300	10,000	500, 000		Manure Chemical	300	5,000	250,000 150,000	
Maintenance Cost(2nd yr) (after 2nd yr)	yr) 20.0% r) 10.0%	(Pesticide)	ne7	nnn * 7	000 007		[Pesticide]				
Maintenance of Existing Terr	ng Terrace	Calfan Butiran	3, 600	20	60, 000	!	varran Butiran	3,000	10	30,000	
Working Capital	0. 0	[Labor] Labor Cost	604		000 000	•	[Labor] Labor Cost	000		000 000	
With Project Without Project	35. 0X 70. 0X	Vegetable			45,000		Vegetable Tree	ie 3,600	n 6		
In-Use Value of Land	0	Maintenance an Harvesting	ខ្ល	40. UX of	costs		Maintenance and Harvesting	e and Ing	48.0% of	costs	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 8 - 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	locaersj Agriculturel Equipment	iquipment		50, 000		lutnersj Agricultural Equipment	Equipment		50, 900	
		f			3000000000000000000000000000000000000						

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AGIBE	
DR2	

Table 2: Inflation Rates and Indexes. Exchange Rate, and Productivity Indexes

DRZAG135:8	Table 3-1: Revenu	Year	Inflatio Revenue 1) Goose	

lear -	139	1393	1934 1.	2 2 2	1996 1	165)	1998	9 9 9	2000	2001	2002	592 202	2004 11	
nflation [ndex	1.0	08	1.17	1.25	. 1.36	1.47	1.59	L. 71	1.65	2.00	2 16	2.30	2.52	
0 4 -	5	÷4	050 520-520	515, 852 378	SS7, 120	804, 555 441	855.014 476	718, 521	794. 649 255	896, 554 600	968, 278 848	1. D45. 740	1. 129, 319 755	
e,		-	583 583 174, 523 350	0 1. 345 276, 945	L, 265 407, 126 408	1, 372 441, 750 441	1. 378 473. 395 476	1. 398 525. 073 514	1. 470 580. 267 555	1, 495 655, 174 600	107, 538 707, 538	764, 195 764, 195	1,495 825,330	
Change in Pr Quenticy (3) Xaize Price	Price	14		0 398 1. 150, 747 378	1. 242, 807	1, 348, 623	1, 453, 415 1, 453, 415	1, 502, 854 1, 502, 854	1. 771. 340 1. 771. 340	1, 000, 004 2, 000, 004 500	2, 160, 004 848	1, 093 2, 332, 805 2, 332, 805	2, 519, 429 755	
Ghange in Price (4) Ground Nuts Price	fice	e		3, 045 587, 803 1, 005	3. 045 742. 827 1. 088	3, 050 806, 073 1, 175	0 3, 074 874, 665 1, 269	358, 028 1, 371	1, 055, 732 1, 481	1, 135, 405 1, 135, 405	3, 335 1, 291, 637 1, 721	1, 334, 329 1, 334, 329	1, 505, 866 7, 335 2, 015	
coange in relea Quantity (5) Albizia, tree Price Price a beite	5		341 341 29, 150	683 683 31, 493	. 583 04,012	585 585 35, 733	539 534 750 33, 672	699 42, 546	715 46, 273	748 13, 975	748 748 53, 973	2 748 932.556 58.291	748 748 52.354	
Giange in r Quantity (6) Albizia, fire Price	3	•	5.832	0 6.235	5, 802	7, 347	11 251, 200 7, 934	8, 560 0	0 0 9, 255	5, 395 0 2	0 0 10, 755	15 371, 062 11, 655	0 0 12, 591	
undige in Frice Quantity (7) Jack Fruit Price	0 		2000	000	0 405, 147 520	0 661. 198 735	32 552, 125 723	1. 235, 268	1, 358, 195 925	1. 499, 253 1. 000	1. 619, 194 1. 079	12 1, 748, 729 1, 165	1, 388, 525 1, 253	
unange in Frice Quantity (5) Avocado Price			000	000 2100 2100	\$00 580 580	300 22 20	1, 200	1, 500 854, 912 857	1, 388, 195 2, 388, 195	1, 995, 005 1, 998, 005 1, 000	L. 598, 555 2. 598, 555 1. 073	2, 914, 500 2, 914, 549	7, 147, 713 1, 147, 713	
Gnange in Frice Guantity Total Revenue	Tice	1.2	264. 523 2.	131. 371	3, 358, 027	3, 862, 239	5, 314, 285	5, 946, 756	6, 980, 780	8. 245, 394	2. 500 9. 444, 757	2.500	2,500	
2005 2006 12 13	2007	200 3 15	2009 15	2010	2011 18	2012 19	2013	2014 21	2015	2016 23	2017	2018 25		
2, 72 2, 94	2, 17	5 5	DZ . C	5.70 4.00 4.32		4, 55	2° 5'	5.44	5, 87	6, 34	5. 85	7.40	•	
1, 219, 751 1, 217, 331 1. 816 881	1. 422. 718 1.5	1, 536, 535	1, 655, 458 J. 110	1, 792, 215 1, 192, 215	1. 935, 592 1. 235	2, 030, 439 1, 398	2. 257, 674 1. 510	2, 438, 288 1, 631	2. 633, 351 1, 761	2.844.020	3, 071, 541 2, 055	3, 317, 264 2, 219		
1, 455 1, 495 891, 357 962, 865 3, 816 881	1. 495 . 039. 678 1, 1	t. 495 122, 553 1, 028	1, 212, 581 1, 212, 581 1, 110	1, 203, 535 1, 203, 535	1, 414, 471 1, 414, 471	1. 527, 629	1, 649, 839 1, 649, 839	1, 781, 826 1, 781, 826 1, 631	1. 924. 372 1. 924. 372 1. 761	2. 078. 322 2. 078. 322	1. 495 2. 244, 588 2. 055	2, 424, 155 2, 424, 155 2, 219		
1,090 1,093 1,093 2,552 3,5552 3,552	3, 173, 755 3, 4	3, 427, 655 1, 023	1, 701, 568	1, 093 2, 998, 015 1, 199	4, 317, 255 1, 259 1, 259	4, 562, 288 1, 398	1, 033 5, 016, 351 1, 510	5, 439, 259 1, 691 1, 531	5, 374, 299 5, 374, 299	5, 344, 351 1, 902	6, 851, 695 6, 851, 695	7, 400, 051 2, 200, 051		
1.625, 325 1.756, 442 1. 2.175 1.256, 442 1.	1, 356, 957 2, 0	2, 048, 714 2, 048, 714	2. 212. 511	2. 389, 520 2. 389, 520 3. 197	2, 580, 789 2, 580, 789	2. 787. 252 2. 787. 252	3, 010, 233 4, 027	1.251.025 1.251.021	3. 511, 135 3. 511, 135	3, 792, 026 5, 072	4, 995, 388	2, 335 4, 423, 019 5, 917	·	
0 748 748 748 748 0 0 67,931 73,430	748 748 79, 304	748 370, 377 85, 643	743 743 92, 500	748	748 107, 893	740 740 116, 524	2, 013, 533 125, 346	135, 514	746 146, 787	748 748	745 745 171, 212	2, 958, 541 124, 905		
0 0 0 11, 538 14, 685	0 15. 361	543.151 17.130	15, 500	19, 530	21.573	23, 305	505, 413 25, 169	27, 183	0 29, 357	31, 706	0 0 34, 242	1, 153, 417 36, 952	·	
	۰.	32	9				32		Ð	•		12		

2. D35, 718 1.242, 855 2.373, 15 2.563, 457 2.775, 01 2.957, 155 3.455, 716 3.455, 718 3.775, 375 4.077, 408 4.403, 598 4.735, 846 5.133, 156 5.547, 255 1.134, 156 1.1468 1.1713 1.1468 1.1590 1.1500 1.1500 1.50

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with Bench	
24	
Agraforestry	
<with project=""></with>	
Expense (2/2)	
and	
Revenue	

DR2AGIBE:8 Table 3-2: Revenue and Expense(2/2	Year 1 a	Expense 1) Seeds		•	• .		• .•	2) Fert	3) Pesticide Ca	4)Labo	5) Others	Total	Net Income		<u>ن</u>	14	21	11	
uce and Expe			change Red Beans	change in price Maize	Ground N	Albizia, tree Albizia, tree	Jack Fru change Avecado	2) Fertilizers Manure Chancel	Line Licide Cairan	Butiran 4)Labor Cost Crop & Vegetabl	5 1 1 1	aracanaacanaaaan Total Expense	Net Income strationstrationstrates	2005 12	621, 434 67 70, 710 7	142, 780 15	285, 560 30	122. 383 13	۵
inse (2/2)		vddy	in price	in price	uts in price	tree tree	sck Fruit change in price coado	in price		egetable		4		2005 13	671, 149 76, 367	154, 203	308, 405	132, 174	G
<pre><#ith Project></pre>	18	Sub-total	·					Sub-total	Sub-tota	Sub-tota		1999,404,404,404,404,404,404,404,404,404,		2007 14	724, 841 82, 476	166, 539	333, 078	142, 748	0
oject) Agr	1993 0	11 384, 1 25,	30	61	21	63	216	_	_		о и й	1. 1.	-450, -450,	2008	782, 828 89, 075	179, 862	359, 724	154, 167	٥
aforestry.	1994	163	30, 518	61, 236	26, 244	23, 328	23, 328 26 120	922	145, 800 81, 648 48, 656	202	6, 120 8, 120	24		2009	919.454 96,200	194, 251	388, 502	166, 501	74, 000
Agraíorestry l with Bench Terrace	1995	287.844 32,753	66, 135	132, 270	56, 687	а		: 225 255	314,928 176,360 100,777	585	52, 335	987, 407	959 -256, 036 sectors second second	2010 17	913, 090 103, 897	209, 791	419, 582	179, 821	¢
ch Terraçe	1996	310, 872 35, 373	71, 426	142, 851	61, 222	Q			340, 122 190, 458 108, 839			3, 251, 433	106, 534 **********	2011	\$86, 138 112, 208	226, 574	453, 149	194, 207	Ċ
	1997.	335, 741 38, 203	77,140	154, 279	66, 120	ð		1, 366, 475 754, 664 264, 479	367, 332 205, 706 117, 546	88, 160 1, 543, 575 1, 503, 123 40, 553	73, 468	. 525, 065	337, 174 	2012	1, 065, 029 121, 185	244, 700	489, 401	209, 743	0
	1998	352, 601 41, 259	83, 311	165, 522	71,409	0		1, 475, 793 793, 437 285, 637	396, 719 222, 162 126, 950	1, 737, 310 1, 623, 372	79, 344	3, 877, 210	1, 437, 073	2013 20	1, 150, 231 130, 880	264, 276	528, 553	226, 523	0
	1999	425, 885 44, 559	89, 975	179, 952	77, 122	34, 276	·	1, 593, 857 856, 912 308, 488	428, 456 239, 935 137, 106	1, 909, 586 1, 753, 242 1, 755, 242	85, 691		1, 691, 502	2014 21	1, 350, 980	285, 418	570, 837	244, 644	108.731
	2000	422, 938 48, 124	91, 174	194, 348	83, 292	0		1, 721, 365 925, 465 333, 167	462, 733 259, 130 148, 074	2.063.047 1,893.502 1,893.502	92, 547	4, 559, 026	2, 421, 757	2015 22.	1. 341. 629 152, 658	308, 252	615.504	264, 215	0
	2001	456, 773 51, 974	104, 948	209, 895	89, 955	0		1, 859, 989, 359,	279, 861 279, 861	2. 258.	56	4, 954, 133	3, 291, 251	2016	1, 448, 960 164, 871	332, 912	865, 824	285, 353	c
	2002	493, 314 56, 132	113, 344	226. 637	97, 152	•		2,007,800 1,079,452 388,606	539, 731 302, 249 172, 714	2, 471, 959 2, 208, 580 2, 208, 580	107, 946	======================================	4, 051, 478 	2017	1. 564, 877 178, 060	359, 545	119, 050	308, 181	-
	2003	532, 780 60, 623	122, 411	244, 522	104, 924	0			582, 910 326, 429 186, 531	· · ·			5, 610, 505	2018	1, 690, 067 192, 305	388, 309	775. 617	332, 836	C
	2004	625, 765 55, 472	132, 204	264, 403	113. 318	50, 363			529, 543 352, 544 201, 454		-		4, 649, 172	2619 26					

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6, 878, 608 3, 698, 177 1, 331, 344 1, 849, 088 1, 035, 489	531,705 443,761 8,515,272 7,566,469 7,566,469 7,566,469 369,818	18, 589, 255	16.060.811
6, 359, 082 3, 424, 238 1, 232, 726 1, 712, 119 958, 787	7, 731, 8/8 410, 809 7, 731, 407 7, 005, 990 7,31, 417 342, 424	латаланын жаламаттан жалалан жалалан жаламаттан жалактан жалалан жалалан жалалан жалан жалан жалан жалан жалан 7, 309, 804 8, 662, 496 9, 355, 496 9, 964, 075 10, 865, 802 11, 551, 250 12, 651, 534 11, 651, 548 15, 748 15, 748 16, 972, 576 18, 589, 255	11, 275. 672
5, 897, 298 3, 170, 590 1, 141, 413 1, 585, 295 1, 585, 295 887, 765	7, 164, 256 571, 256 6, 487, 028 677, 028 517, 028 317, 059	15, 715, 348	8, 760, 713 9, 687, 071 10, 440, 437 11, 275, 672
5, 460, 461 2, 935, 732 1, 467, 868 1, 467, 868	5, 006, 507 5, 006, 507 5, 005, 507 5, 072 5, 072 5, 072 5, 072	14, 551, 248	9, 687, 071
5, 055, 983 2, 718, 270 578, 577 1, 359, 135 1, 359, 135 751, 116	434, 923 326, 192 5, 561, 581 5, 561, 581 5, 561, 371 5, 571, 827	13, 563, 657	8, 760, 713
4, 681, 465 2, 516, 917 306, 090 1, 258, 458 1, 258, 458	402,707 5,853,410 5,149,612 713,798 251,692		7.517,512 7,105,586 7,674,033 10,930,718
4, 334, 690 2, 330, 479 838, 972 1, 165, 239 1, 165, 239	372, 877 279, 657 5, 265, 949 4, 758, 159 497, 790 233, 048		7, 674, 033
4, 013, 602 2, 157, 851 776, 826 1, 078, 925 604, 198	245, 256 258, 942 258, 942 4, 414, 962 4, 414, 962 215, 785 215, 785		7, 105, 586
	219, 582 239, 761 239, 761 4, 575, 442 4, 087, 928 4, 087, 928 4, 087, 928 4, 087, 928 193, 801		7. 517, 512
	235,001 222,001 3,785,118 505,902 185,001	as***≤==*** 9, 355, 496	8, 243, 574 5, 831, 158
3, 185, 127 1, 712, 971 516, 570 856, 485 479, 532	274, 075 205, 557 4, 042, 612 3, 504, 739 3, 504, 739 537, 873 171, 297		8, 243, 674
2, 950, 117 1, 585, 085 793, 042 444, 104	253, 774 190, 330 3, 532, 134 3, 245, 129 387, 005 158, 608	7, 909, 804	5,967,643
2, 731, 528, 734,	234, 975 3, 353, 087 3, 304, 749 3, 358, 338 146, 860	T, 323, 892	5, 525, 596
2, 529, 250 1, 359, 812 489, 532 532 532 532 532 532 532 532 532 532	217, 570 163, 177 2, 182, 175 2, 782, 175 2, 794 115, 981	ааситеттакки по 1323, 892 6, 781, 382 7, 323, 892	5, 116, 292

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Infletion Index 1.08 J.17 1.26 1.36 1.47 1.59 1.71 1.85 2.00 2.15 2.33 2.52 Bench Ferzae (15 Year) Investment 506.528 131.010 70.745 76.405 82.517 83.115 95.248 103.948 112.264 121.245 130.345 Total Annual Investment 506.528 131.010 70.745 76.405 82.517 83.115 96.248 103.948 112.264 121.245 130.345 Total Annual Investment 506.528 131.010 70.745 76.405 82.517 83.115 96.248 103.948 112.264 121.245 130.345 Total Annual Investment 506.528 131.010 70.745 76.405 82.517 83.115 96.248 103.948 112.264 121.245 130.345 Total Annual Investment 506.528 131.010 70.745 76.405 82.517 83.115 96.248 103.948 112.264 121.245 130.345 Total Annual Investment 506.528 131.010 70.745 76.405 82.517 83.115 96.248 103.948 112.264 121.245 130.345		2		67	6	7. 7.		29 27 27	4002	1007	6 2002	2003	11
Bench Terrace (1st year Terrace Maintenance Serrecentenance Total Annual Investment assessment 2005		1.08	1.17	1.26	1. 36	1. 47	1. 59	1.71	1.85	2.00	2.15	2. 53	2.52
Total Annual Investment assessmentancerent 2005	r) Investment	searcasea sent 60	606, 528	131,010	70, 745	76, 405	82, 517	89, 115	96, 248	103, 948	112, 254	121, 245	130. 345
2005 2006			6, 528 	605,528 131,010 131,010	806, 528 131, 010 70, 745 76, 405 82, 517 89, 113 95, 248 103, 548	76,405	82, 517.	89,119	95, 248	103, 948	112.264	\$06, 528 131, 010 70, 745 76, 405 82, 517 89, 113 95, 248 103, 948 112, 264 121, 245	130. \$45
12 13	2007 14	2008 15	2009 16	2010 17	2011 18	2012 19	2013 20	2014	2015 22	2016 23	2017 24	2018 25	2019 26
2. 72 2. 94		3.43	3.70	4.00	3.17 3.43 3.70 4.00 4.32 4.66 5.03 5.44 5.37 5.34	4.85	5.03	5, 44	5, 87	6.34		6.85 7.40	7.99
141,420 152,734	164, 953	178, 149	192, 401	207, 793	207, 793 224, 416 242, 370	242, 370	251, 759	282, 700	305, 316	329, 741	356, 121	384, 610	415, 379
141.420 152.734 154.953 178.149 132.401 207.733 224.415 242.370 261.759	164,953 184,953	178, 149	192,401 1925,401	207,793	164.953 178.149 182.401 207.793 224.415 242.310 261.759	242,370 242,370 **********	.261,759 .sereestere		205, 316 205, 316 ====================================	329, 741		384, 510 384, 510	415,379
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Table 5: Working Capital	<with< td=""><td>Project> AS</td><td>roforestry</td><td><pre>KHith Project> Agroforestry 1 with Bench Terrace</pre></td><td>ch Terrace</td><td></td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td></with<>	Project> AS	roforestry	<pre>KHith Project> Agroforestry 1 with Bench Terrace</pre>	ch Terrace		•						
Year	•	1993	V661	1955	1935	1997	1998	6861	2000	1002	2002	2003	2004

Year			000	1994	1095	5001 ·	1997	1998 5	9 6661	2000	2001	2002	2003	2004
Inflation Index	nflation Index		1.08	1.17	1.26	1.35	i i		1. 71	1.85	2.00	1		i -
Operational Expenses excluding Labor Cost	Expenses abor Cost		0		1, 635, 736	1. 766, 595	1. 766, 585 1. 907, 923		2,060,556 2,259,677	2, 401, 433	2,403,433 2,595,708	2, 803, 364	5	3,027,533 3,320,207
Morking Capital required	tal require	5	ø	152, 821	572,508	618, 308	618, 308 667, 773	721, 195	790, 887	841, 202	308, 498	981, 177		1.059,672 1.162.073
Change in Working Capital	rking Capit	la.	0	352, 821	219, 585	45, 801	48, 465	53, 422	\$9, \$32	50, 314	67, 296	72, 580	78, 454	102.401
	日前日日日日月代前月日日日	***		*********		***********			**********		***********	*************		
2005 12	2006 13	2007 14	2008 15	08 2009 15 2009		2010 2011 17 2011	2012 19	2013	2014 21	2015	2016	2017	2018 25	2019
2.72	2 94	3 17	3. 43		1 4.00	4.32	4, 66	CQ.5	5.44	5, 87	5, 87 5, 34	6, 85	7.40	7, 99
3, 531, 431, 3, 813, 946, 4	3, 531, 431 3, 813, 946		4, 448, 5		878, 474 5, 188, 831 5, 501, 938 5, 052, 253 6, 535, 433 7, 168, 079 7, 624, 096 8, 234, 023 8, 892, 745 9, 504, 165	5, 501, 938	5, 052, 253	· 6. 536, 433	7, 168, 079	7.624,098	8, 234, 023	8, 892, 745	9, 504, 155	0
1,235,001	1, 236, 001 1, 334, 881 1		1, 557, 00	441, 672 L. 557, 005 L. 701, 466 L. 816, 031 1, 961, 373 2, 118, 288 2, 287, 752 2, 508, 827 2, 568, 433 2, 861, 908 3, 112, 461 3, 361, 458	5 1.816.031	1, 961, 373	2, 118, 288	2, 287, 752	2, 508, 827	2, 668, 433	2, 881, 908	3, 112, 461.	3, 361, 458	4
73. 528	73, 528 98, 880	106, 790		115, 334 150, 461 108, 625 145, 287 156, 910 169, 463	1 108, 625	145, 287	156, 910	169, 463	221, 075	221.075 159.606	213, 475	213, 475 230, 553	248, 997 -3, 351, 458	, 361, 458

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	0	1		6 n n 1		1948			2001	5 7002		
Inflation Index	1.08	1.08 1.17 1.26 1.47 1.59 1.71 1.85 2.00 2.16 2.33 2.52	1.26	1.36	1.47	1. 59	1.71	1.85	2.00	2.18	2.33	
	ural Production	1, 264, 523	2, 731, 371	3. 358, 027 3, 852, 239	3, \$52, 239	5, 314, 283	5, 245, 756	5, 920, 733	B, 245, 394	3, 444, 757	7 11. 506. 056 11. 018. 365	ä
Expenditure Envestment Maintenance Derating Expense Change in Working Capital En-Use Value of Land	0 0 8	605, 528 0 1, 715, 483 352, 821	131,010 2,987,407 219,685	70, 745 3, 251, 433 45, 801	76, 405 3, 525, 865 49, 465	3, 87, 517 3, 877, 210 53, 422	4, 255, 254 69, 692	95,248 4,559,026 50,314	4, 954, 133	112, 264 5, 383, 279 72, 580	1 121, 245 5, 895, 549 75, 494	130, 945 8, 367, 193 102, 401
atterstrongerenterstrongenerge NCF-With Case (Nominal)	0	0 -1. 410, 309 -606, 733 -9, 952 211, 304 1, 301, 134 1, 533, 580 2, 275, 134 3, 120, 07 3, 876, 534 5, 410, 767 4, 415, 826	-606, 733	-9, 952	211, 304	1, 301, 134		2, 275, 194	3, 120, 017	ажет = = = = = = = = = = = = = = = = = = =	4 5, 410, 767	4, 415, 825
		0 -1, 209, 113 -441 -7, 215 143, 810 819, 935 894, 310 1, 229, 217 1, 560, 785 1, 795, 585 2, 320, 585 1, 753, 585	-481, 844.	-7, 315	143,810	819.935	894, 310	1, 229, 217	1, 229, 217 1, 560, 785	1, 795, 585	5 2, 320, 585	1, 753, 585
Net Present Value	7, 185, 693	7,185,693					1 6 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4 4 A A A A A A A A A A A A A A A A A A			1
2005 2006 12 13	2007 2	2008 2009 15 2609	19 2010 17	2011 18	2012 19	2013 20	2014 21	2015	2016 23	2017 24	2018	2019
2. 72 2. 94 2. 34	3.17	3.17 3.43 3.70 4.00 4.32 4.66 5.03 5.44 5.87 5.34 6.85 7.40 7.99	1.00	4.32	4,66 4,56	5, 03 ====================================	5, 44	5.87	5, 34 5#¥8×8===================================	6.85 54.85	7,40	7, 99
11. 897, 674 12, 849, 488 13, 87	7,447 IS,905,	877, 447 16, 906, 170 16, 186, 554 17, 481, 586 17, 801, 188 19. 225, 283 23, 582, 252 22, 424, 372 24, 218, 320 26, 155, 785 28, 248, 248, 34, 650, 066	54 17, 481, 586	17. 801, 188	19. 225, 283	23, 582, 252	22, 424, 370	24.218.320 2	26, 155, 785 2	28, 248, 248	34, 650, 066	
141, 420 152, 734 16 6. 781, 382 7, 323, 892 7, 90 73, 928 93, 880 10	164, 953 178, 149 905, 804 8, 662, 496 106, 790 115, 334	149 192,401 496 9,355,495 334 150,461	01 207,733 16 9,964,075 10 108,625	224, 416 10, 535, 502 11, 5 145, 287	42, 370 551, 250 156, 910	261, 759 2 12, 651, 534 13, 6 169, 463 2	282, 700 13, 553, 557 221, 076	282, 700	329, 741 15, 715, 348 213, 475	356. 121 16, 972, 576 230, 553	384, 510 384, 510 18, 589, 255	-3, 361, 458
4,900,943 5,273,981 5,63 4,900,943 5,273,981 5,63 44,900,943 5,773,981 5,63	ионтканатарананы 5, 695, 900 7, 950, 192 стерактараныкатара - 766 606 9 300 606		итеритичивания пробесси. 6, 488, 297 7, 201, 094 етитерититеритири 1 104 504 1 000 007	инканиканика 6, 735, 882 Инентикатика • ссо 796	аликатары пекаларынан 6,735,882 7,274,753 1 100 700 100 100 100 100 100 100 100 100	астатристаснатектики 7, 274, 753 -10, 499, 495 	салакетквинтелесинки 0.499.435 8.256.917 1.сктреканканаристе	на в в в в в в в в в в в в в в в в в в в	алаятесцияталахи валаго 9.202,149 9.897.221 10.888,999 	жанакодааа 10, 588, 999 варженина 1 ссл. тос	6.488.297 7,201,094 5,735.882 7,274.753 10,499,456 8,256,937 9,202,149 9,697,221 10,588,999 15,427,204 3,351,458	

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Revenue	

Ysar	1991 0	1994	1995 2	1956	1991 . 4	1998	1929 5	2000	2001 8	2002 9	2003 10	2004
Inflation Index	1 08	1.17	1.26	1.36	1.47	1 59	1.71	1.85	2.00	2.15	2.33	2.52
Revenue 1)Gross Yalue of Agricultural (1) Upland Paddy Price	Production	386, 662 350	835, 189 378	902, 004 408	374, 165 441	.1, 052, 098 476	1, 136, 255	1, 227, 167	1, 325, 340	L, 431, 367 648	1, 545	1. 569
Change in Price Quantity (2) Maie		1, 105 253, 592	2.210 547,975	2.210 591.813	2, 210 539, 158	2, 210 590, 290	2, 210 745, 514	2, 210 805, 155	369. 369.			1. 095.
Change in Price Quantity (3) Cassava		725 725 185 186	1, 450 1, 450	1, 450	1.450	1,450	514 0 1.450 547 128	555 1, 450 597 570	500 1, 450	548 1.450 2.1.450		
Price Change in Price			50	89	73	79	144, LUS 86 0	0 0 0	500	659		
(4) Quantity Price		3, 175 0 0	6, 350 0 0	6, 350 0 0	6. 350 0	6, 350 0 0	6, 350 0 0	6, 350 0 0	ບໍ	6, 350 0	6, 350 0 0 0	6, 35
3		0 0 29, 150	31, 493	34, 012	36, 733	0 39, 672	0 42.846	48. 273	48. 975 48. 975	0025	0 58 241	6 10 10 10 10 10 10 10 10 10 10 10 10 10
		0 0 5, 832	0 0 6, 293	5, 802	7, 347	0 7.934	0 0 8, 560	0 9, 255			1 I	1 2
		283 583	2000	830.0	0	0 0 183 183	0 0 857	0 0 0 526	1, 000	1, 079		L.
Change in Price Quantity		0	0	o	0	e	0	0	0			i
Total Revenue		825, 520 1	. 733, 122	1, 325, 772	2,079,834	2, 246, 221	2, 425, 918	2, 619, 992	2, 829, 591	3, 055, 958	3, 300, 435	3. 564. 470
2005 2006 12 13	2007 2008 14 15	2003	2010 17	2011 18	2012 19	2013 20	2014 21	2015	2016 23	2017 24	2018 25	2019 26
2.72 2.94	3. 17 3. 43	3.70	4.00	4.32	4.66	503	5.44	5.87	6.34	6.85	7.40	7. 99
1. 803. 111 1. 947. 358 2. 103. 816 831 84 816 831 84 1. 183. 036 1. 277. 679 1. 379. 1. 183. 036 1. 277. 679 1. 379. 811. 451 932.559 1. 007. 136 1. 454 932.559 1. 007. 136 6. 350 6. 350 5.	103,148 2,271,400 952 1,028 0 0 2,210 379,894 1,490 225 952 1,028 952 1,028 1,028 1,450 1,028 1,450 1,027 153 1,027 153 1,027 153 1,027 171 5,350 5,350	2, 453, 112 1, 110 1, 110 2, 210 1, 100 1, 100 1, 170 1, 170 1, 170 1, 170 1, 170 1, 170 1, 170 1, 200 8, 350 8, 350	2, 549, 361 1, 139 1, 139 1, 738, 268 1, 738, 268 1, 738, 268 1, 268, 735 1, 268, 735 1, 268, 735 6, 350	2, 851, 310 1, 295 1, 295 1, 295 1, 200 1, 370, 255 1, 370, 255 1, 370, 255 1, 370, 255 1, 255 2, 255 1, 255 2, 2,	3, 090, 215 1, 398 1, 398 2, 027, 518 1, 398 1, 479, 854 1, 479, 854 1, 479, 854 1, 479, 854 1, 479, 854	3, 337, 432 1, 510 2, 189, 718 2, 189, 718 1, 510 1, 508, 242 1, 508, 242 1, 508, 242 1, 508, 242 2, 350	3, 604, 425 1, 631 1, 631 2, 364, 425 2, 364, 825 364, 826 1, 631 1, 631 1, 128, 105 1, 12	3, 892, 728 1, 761 2, 554, 087 2, 210 2, 554, 087 1, 450 1, 450 1, 450 1, 450 1, 450 1, 450 1, 450 1, 854, 1950 1, 751 1, 7511, 751 1,	4, 204, 203 1, 902 2, 758, 414 1, 902 1, 450 2, 013, 325 2, 012 2, 002 2, 002 2	4, 540, 538 2, 055 2, 055 2, 055 2, 055 2, 055 2, 055 2, 174, 341 2, 174, 341 2, 174, 341 2, 174, 341	4, 903, 782 2, 219 3, 217, 414 2, 219 2, 219 3, 212 2, 219 2, 219 3, 212 2, 219 3, 212 2, 219 3, 212 3, 213 3, 213 2, 213 3, 213 2, 213 3, 213 2, 213 3, 213 2, 2, 213 2,	•• . • •
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73, 430 0 14, 585	85, 17,	92. 18.	99, 900 0 19, 980	107, 393 21, 579 21, 579	116, 524 23, 305	125, 846 0 25, 169	135, 914 0 27, 183	146.787 146.787 0 29.357	158, 530 158, 530 31 206	171, 212 0 34 242	184,909 184,909 76 03 76 03	159, 702 19, 702 19, 702
0 0 0 1 1,350 1,469 1.	0 0 565 1, 713	1, 850	0 1, <u>9</u> 38	0 2, 158	2, 330		2.718		3.171	3.424		
0	0	0	0	0	6	0	0	0	0	Đ	0	
3,849,527 4,157,598 4,490,	205 4, 849, 422	5, 237, 376	5. 656. 366	8.108.875	6. 597. 585	7 195 342	7 695 423	8.311.057	8 975 941	9 604 017		

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	•	1993	1994 1	2 261	1995	1997	1938	\$ 6661 :	2000	2001	2002	2003 10	2004
Expenses 1)Seeds Upland Paddy	Sub-total	tal	62, 111 15, 163	134, 159 32, 753	144, 892 35, 373	156, 483	169, 002 41, 259	182, 522	197, 124 48, 124	212, 895 51, 974	229,926 56,132	248, 320 50, 623	268, 185 55, 472
change in price Maize	•		40, 824	88, 185	95. 234	102, 853	111.081	119, 558	129, 565	139, 930	151, 125	163, 215	175.272
Cassava Cassava channe in price			6, 124	13. 227	14, 285	15, 428	15, 562	17, 595	19, 435	20, 590	22, 569	24, 482	26, 441
change in price			٥	0	0	0	0	0	0	8	8	6	
Albizia. tree change in price Jack Fruit				0	0	0	a	0	0	•	Ð	0	
change in price			0										
change in price 2)Fertilizers	Sub-total		233, 280	503, 885	544, 195	587, 731	534, 750 206 710	685, 530 420, 455	740, 372				1, 007.2
Chemical Chemical			87, 480	128, 957	204.073	220, 339	238, 031	257,074	277.640	295, 851	323, 839	349. 746	377, 726
icide. Cairen	Sub-tota		40,824	88, 180 50, 388	95, 234 54, 420	102,853	111,081	119,968 68,553	129, 565 74, 037				176.2
Butiran 4)Labor Cost Crop and Vesetable	Sub-total e		17,496 349,920 349,920	37 791 755 827 755 827	40, 815 815, 295 815, 295	44,080 881,597 881,597	47, 606 352, 125 352, 125	51, 415 1, 028, 295 1, 028, 295	55,528 1,110,558	59, 970 1, 199, 403	64, 768 1, 295, 355 1, 295, 355	1, 398, 983	75.545 1.510.902
5) Others			58, 320	52, 586	0 68.024	73, 466	79, 344	85, 691	92, 547				125, 909
aesikaranankaesaan Total Expense	***	***	744, 455 1,	. 545, 037	жилансевта 1, 558, 640	1.802,131	1, 946, 301	2, 102, 005	2, 270, 168	2, 451, 779	2. 647. 922		3. 088, 536
Net Income			81, 065	238, 086	257, 132	277, 703		323, 913	349, 825	377, 812	408, 037	•	475, 934
2005 2006 12 13	2007	2008	2009 16	2010 17	2011 18	2012 19	2013 20	2014	22	2016 23	2017 24	2018 25	2019 25
289, 540 312, 811 70, 710 76, 367	337, 836 82, 476	364, 863 89, 075	354, D52 36, 200	425, 576 103, 897	459, 622 112, 208	496, 392 121, 185	536, 103 130, 880	578,992 141,350	525, 311 152, 658	675, 335 164, 871	729,363 178,050	787, 712 192, 305	
190.374 205,604 ;	222, 052	239, 816	259, 001	279, 721	302, 099	326, 267	352, 358	380, 558	411, 002	443, 853	475, 393	517, 745	
28, 555 30, 841	33, 308	35, 972	38, 850	41, 958	. 45, 315	48, 940	52, 855	57, 084	61, 550	66, 582	71, 909	77, 662	•
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1, 087, 849 1, 174, 877 1, 679, 906 734, 298 407, 944 440, 579	258,858 1 793.042 475.825	1, 370, 377 856, 486 513, 891	1, 480, 007 325, 005 555, 003	1, 598, 408 999, 005 599, 403	1, 726, 280 1, 078, 925 647, 355	1, 864, 383 1, 165, 239 699, 144	2.013.533 1.258.458 755.075	2, 174, 616 1, 359, 135 815, 481	2, 348, 585 1, 467, 866 380, 720	2, 536, 472 1, 585, 295 951, 177	2, 739, 390 1, 712, 119 1, 027, 271	2, 958, 541 1, 849, 088 1, 109, 453	
90.374 205.504 08.785 117.488	222. 052 126. 887	239, 815 137, 038		279, 721 159, 841	302, 399 172, 628		0 352, 368 201, 353	380, 558 217, 462	0 411,002 234,858	443, 883 253, 647		517, 745 295, 854	
81,539 88,116 1,531,774 1,752,316 1,9 1 831 774 1,752 316 1,9	85, 165 03, 301	102, 778 2, 055, 565 9, 055, 565	2, 220, 011	2, 397, 512	2, 589, 471	2, 796, 574	3. 020, 300	3. 261, 524	176, 144	3, 804, 703	205,454	221.851	
	58, 608	171, 297	i i	199, 801	215, 785		251, 692	271, 827	J, J64, 910 293, 573	317, 059	r	369, 818	
ласкинаталалалан (192,468 3,8 3.335,819 3.802,468 3,8		4, 201, 319		4, 901, 118	5, 293, 207	5. 716, 664	6, 173, 997	6, 567, 917	7, 201, 350	7, 777, 458	**************************************	9, 071, 627	0

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Table 8: Working Capital (Without Project) Dry Farming without Terrace

inflation Index		1, 08 24455959535	1.17	1, 26 99 80 2 8 3 4 2 2	1. 36 Pressesses	1, 47 	1, 59 •**************	1.71 Egaseeses	I, 85 Eexekatette	Z. CU Tubekoscaped	2. 15 Example 15	2.33 ***********************************	2.52
Operational Expenses excluding Labor & Others			336, 215	725. 224	784, 322	847.068	914.833	\$88, 020	1, 067, D61	1, 152, 425	1, 244, 620	1.344,190	1, 451, 725
Working Capital required	÷	-	235, 350	508, 357	549, 025	592. 947	640. 383	691.614	745, 943	808, 598	871.234	940, 933	1, 016, 203
Change in Yorking Capital		0	235, 350	273, 006	40, 569	43. 922	47, 436	51, 231	55, 329	59, 755	64, 536	69, 599	75.275
2005 2006 13	2007	2008	2009 2009 15	2010	2011 2011 18	2012 19	2013	2014	2015 22	2016 23	2017 24	2018	2019 26
2.72 2.94	3.17	3. 43	3.70	4.00	4. 32	4, 56	5. 03	5.44	5. 37	5.34	5.85	7.40	7, 99
• -	828.755 1	1. 975, 056	2, 133, 060	2, 303, 705	2, 488, 002	2, 687, 042	2, 902, 005	3, 134, 166	3.384,899	3, 655, 691	3, 945, 145	4, 263, 998	6
1,185,304 1,		1. 382, 539	1, 493, 142	1, 612, 594	1, 741, 601	1 880,929	2 031 404	2, 193, 916	2, 359, 429	2, 558, 983	2, 762, 702		0
81, 297 87, 800	34, 824	102, 410	110, 503	119,451	125, 607	133, 328	150.474	162, 512	175, 513	185, 554	204,719	221, 096 -2.	-2. 984. 798
			• •										
Table 9 : Financial Cash Flow States	caent per H	Ha		- I #>	thout Proj	<pre><#ithout Project> Dry Farming</pre>	rming without	it Terrace					
		1993 0	1994 1	1995 2	1996	1997	1998 1998	1959 6	2000	2001 8	2002 9	2003 10	11002
Inflation Index		1, 38	1.17	1.26	1.36	1.47	1.59	17.1	1.85	2,00	2.16		1.52
Receipt Gross Yalue of Agricultural In-Use Value of Land	191 191		825, 520 1.		*===#5,772	2.073.834	2. 246, 221	. 246, 221 2, 425, 918	2, 519, 992	2, 829, 591	, 055, 958	**************************************	=×с≈±==кс 3, 564, 470
Expenditure Maintenance Expenses Operating Expenses Change in Working Capita In-Use Value of Land	-	0	744, 455 235, 350	1, 545, 037 273, 006	1, 663, 640 40, 669	1, 802, 131 43, 922	1, 948, 301 47, 436	2. 102. 005 51. 231	2. 270, 165 55. 329	2, 451, 778 59, 755	2, 647, 922 64, 536	2, 859, 755 59, 699	3, 088, 75,
есканакценекаландадина КСГ-№1 thout Case (Nowinal) касакаланыкалактикан		0	154, 286	-34,921 -34,921 	енанкомнан 216,464 ектектики		0.0001077823220709625 252,483 272,682 ************************************	272, 682	294, 497	294, 457 318, 056 343, 501	343, 501	370. 981	400.650
NCF-Without Case (Real)	1222222222	- 0 - 0 - 0	132, 275	-27,721 15	9, 187	159, 107 **********	159, 107	159, 107	159, 107	159, 107	159, 107		159, 107 x====x
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3, 849, 527 4, 157, 598 4,	490, 205	4, 849, 422	5, 237, 376	5, 656, 366	6, 108, 875	\$, 597, 585	7, 125, 392	7, 695, 423	8. 311, 057	8, 975, 941	9, 694, 017	10. 469, 538	
3, 335, 619 2, 602, 468 3, 81, 297 87, 800	890, 665 \$4, 824	4, 201, 519 102, 410	4, 538, 072 110, 603	4, 901, 118 119, 451	6, 293, 207 129, 007	5, 716, 654 139, 328	6. 173, 997 150, 474	6, 867, 917 162, 512	7, 201, 350 175, 513	7.777.458 188,554	8, 399, 655 204, 719	9. 071. 627 . 221. 096 -2.	, 384, 798
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Table 10: Incremental Cash Flow Table

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Inflution lodex 1.08 1.17 1.25 1.71 1.55 2.00 2.15 2.33 2.32 Net Cash Flow(With Case) 0 -154,286 -34,921 216,454 233,781 525,680 2.25,584 3.120.011 3.85,534 5,410.767 4,415.85 Net Cash Flow(Without Case) 0 -154,286 -34,921 216,454 233,781 252,682 284,457 318.056 343,501 370,351 401.505 Net Cash Flow(Without Case) 0 -154,286 -34,921 216,454 233,781 252,682 284,457 318.056 343,501 370,81 401.567 4.15.85 Incremental Cash Flow(Without Case) 0 -1,256,023 -571,612 -224,417 1048,651 1,200,105 1,401.678 1,594,473 215,456 Incremental Cash Flow(Real) 0 -1,078,338 -453,923 -165,422 -15,297 560,422 15,200 1,401.678 1,401.678 1,478 216,473 216,473 216,473 216,473 216,473 216,473	Year		1993	1994	1995	266 1936	1661 1661	1998 5	1999 5	2000	2001 8	2002	2003	2004	
Net (3a5) Flow(Without Case) 0 -154,235 -34,321 216,444 233,761 552,433 272,632 244,457 318,05 Net (Sash Flow(Without Case) 0 -154,235 -34,321 216,444 233,761 252,433 272,632 284,457 318,05 Incremental Cash Flow(Weat) 0 -1,255,023 -71,812 -226,445 -22,477 1,446,651 1,500,061 1,900,199 1,401.65 Incremental Cash Flow(Meat) 0 -1,255,023 -51,812 -226,445 -22,477 1,446,651 1,500,061 1,401.65 1,401.65 Incremental Cash Flow(Meat) 0 -1,076,338 -453,223 -166,422 -15,297 660,328 735,03 1,076,109 1,401.65 Marginal Net Present Value 8,225,445 10 -1,076,338 -453,233 -166,422 -15,297 660,328 735,503 1,076,109 1,401.65 Marginal Net Present Value 8,225,445 15 166,422 -15,297 501,201 2014 2014 201 201 201 201 201 201 201 21 201 21	Inflation Index		1,08	1.17	1.26	1.36	1.47	1.59	1.71	1.85	2.00	2.15	1 1	2.52	
Net Cash Flow (Without Case) 0 -154,286 -34,921 216,464 233,781 252,433 272,632 294,457 316,05 Increachtal Cash Flow (Monial) 0 -1,256,023 -571,812 -226,415 -22,477 1,043,651 1,506,005 1,506,005 1,506,005 1,501,095 1,401.67 Increachtal Cash Flow (Monial) 0 -1,076,338 -453,923 -156,422 -15,297 560,328 735,203 1,401.67 1,401.67 Increachtal Cash Flow (Meal) 0 -1,076,338 -453,923 -156,422 -15,297 560,328 735,203 1,401.67 1,401.67 Marginal Net Present Value 5,255,445 16 2019 2010 2010 2011 2012 2013 2014 2015 201 201 2005 2007 2008 2009 2010 201 20	Net Cash Flow (With C	ase)	1 E	1.410,309	-\$05, 733	- 9, 952	211, 304	1, 301, 134	1. 532 690	2.275 194	3.120.017	3, 876, 534	5, 410, 787 4	4, 415, 826	
Incremental Cash Flow(Moninal) 0 -1,256,023 -571,812 -226,415 -22,477 1,048,657 1,280,006 1,001,09 1,401,61 Incremental Cash Flow(Real) 0 -1,076,838 -552,823 -166,422 -15,297 660,828 735,003 1,001,09 1,401,61 Marginal Net Present Yalue 8,225,445 -1,076,838 -532,923 -166,422 -15,297 660,828 735,003 1,001,09 1,401,61 Marginal Net Present Yalue 8,225,445 -1,076,838 -532,923 -166,422 -15,297 660,828 735,003 1,001,09 1,401,61 2005 2007 2008 2009 2010 2011 2012 2013 201 201 201 201 201 201 201 21 22 2<	Net Cash Flow(Withou	it Case)	0	-154, 286	-34, 521	215, 454	233, 781	252, 483	272, 682	294.497	318, 056	343, 501	370, 981	400, 560	
Increachtal Cash Flow (Real) 0 -1,076, 338 -653, 923 -155, 422 -15, 297 560, 328 735, 203 1,070, 109 1,001, 10 Marginal Net Present Value 5, 225, 445 2008 2009 2010 2011 2012 2013 2014 2015 2001 2005 2006 2007 2008 2009 2010 2011 2012 2013 201 202 213 14 15 20 201 2011 2012 201 201 203 2065 2007 20 201	Incremental Cash Flo		- 0	1, 256, 023	-571, 812	-226, 416	-22, 477	1,048,651	1, 250, 008	1, 980, 599	2.801.960	3, 533, 033	3, 533, 033 5, 039, 786 4, 015, 166	4, 015, 166	. ·
	[nerements] Cash Flo		- 0	1, 076, 838	-453, 923	-165, 422	-15, 297	550, 828	735, 203	1, 070, 109	1, 401, 578	1, 535, 478	2, 161, 478	1. 1, 594, 478	
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 201 12 13 14 15 16 17 18 13 20 21 22 23 2	Marginal Net Present		25, 445	40000000000000000000000000000000000000		1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,111 1,1111 1,1111 1,1111 1,1111 1,1111 1,1111 1,1111 1,1111 1,11111 1,111111	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	n. U. 新闻社 和 四 四 四 月 七 月 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	1.1.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	山北村山北川久北村村市	п 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(1)什么可以是	а
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4 468 71: A ADE ECA E 101 10 4 700 E 000 E01 E ECE 901 E 040 720 E 5/9 150 D EO0 E1E 1 101 949 2 957 95E D 896 950 3 ED0 75E 14 950 780	432,712 467,5 ************************************	329 504,715 arangementer 50 5 10 104	545,09	13 588,700 Letteretereteretereteretereteretereteret	835,796 	636,550 ***********************************	741,593 	800,920 	864,994 #**********	934,193 	1, 008, 929 	1,083,643 	1,175,815 1 s====================================	2,984,793 *********	
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ial A 1-1 :	Item	Economic Indicator Domestic Inflation Rate Foreign Inflation Rate	Interest Rate(Lending) Interest Rate(Saving) Exchange Rate per USS (Raae Vaar 1992)	id	Working Capital	With Froject			•		Table 1-2 : Parameter Table (2/2)	22722222222222222222222222222222222222	Land compensation M2 Stone M3 Sand M3 Creat care	Terzs (type of cement) #3 Lime Kg Tibber #3	at.	Surveyor Stilled Tebarar

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Table 3 : Revenue and Expenses (per Ha)	(per Ha)		- 15 a	Finencial Anal	Analysis on Check Dam	ск рад										
fear		0 · 2651	1 1994 1	1995 2	0 9661	1997		9 8661	2000	2001 8	2002 9	2003 10	2004 11	2005 12	2005 13	2007 14
Inflation Index 1.17	*****	1, 08	1.17		1.36				1.85	1.59 1.71 1.85 2.00 2.15 2.33 2.52 2.72 2.54 3.17	2.15	2.33	2.00 2.15 2.33 2.52 2.72 2.94 3.17	2. 72	2, 94	3.17
		. Q			0 5,441,956 5,441,956 5,441,556	7, 464, 187 5, 877, 312	5 5	5, 141, 473 5, 552, 791 5, 997, 014	5, 397, 014	6, 475, 775	6.994.917 7.554.510	7, 554, 510	**************************************	8,811,581	9, 516, 507 1(0.277.
Paddy Cultivation						1, 586, 874	5.141.473	5, 552, 791	5, 997, 014	6, 476, 775	6. \$94. 917	7.554.510	3,158,871 8	8.811.581	9, 516, 507 10, 277, 828	0, 277,
Expenses		G	•	1, 791, 310	1. 934. 615	383, 005	1, 240, 936	1.340.211	1,447,427	1.563,222	1, 688, 279	1, 823, 342	1.959.209 2	2.125.745	2. 296. 885 2	2, 450, 536
rish rareing Seeds Feeds				241,865	261,214											
Labor cost Paddy Cultivation				112 111	400,147											
Seeds Chemical						12, 734	41.259			51, 974	56, 132 466, 328	60, 623 503, 634	65, 472 543, 925		76, 357 534, 434	683. 685
Pesticide Labor Cost Equipment						19, 591 220, 399 26, 433	53, 475 714, 093 79, 344	58, 553 771, 221 85, 691	832, 919 92, 547	899, 552 99, 950	85, 357 971, 516 107, 946	53, 205 1, 049, 238 116, 582	1, 133, 177 1. 125, 903	108,785 223,831 135,981	11/.428 1.321.737 146.860	125.887 1.427.475 158.608
nersensensessessessessessessessessessessess				-1, 791, 310	3, 507, 341	310 3.507,341 7,081,182	3, \$00, 537	жжттихенттикии такии т	4, 549, 586	23, 900, 537 4, 212, 580 4, 549, 586 4, 913, 553 5, 3	2016.553 5.306.638 5.731.169	5, 731, 169 6		6, 684, 835	7, 219, 622	2.137.152
At Iccore per 0.4 ha				-716, 524	1, 402, 936	524 1,402,936 2,832,473			1.819,835	1, 560, 215 -1, 685, 022 -1, 819, 835 - 1, 965, 421 - 2, 122, 555 -2, 292, 467 - 2, 475, 855 - 2, 573, 534 - 2, 887, 849	2. 122, 655	2. 292. 467	2. 475, 355	2. 673, 534	2, 387, 849	3, 118, 877
	"我们有这些我们的这些,我们有这些是是是这些。"					6022094688888 247,841 926566252222	646 122.77 247.841 136.519 141.440 159.235 171.514 165.732 200.591 216.638 233.969 222.687 273.902	648822248255 147, 440 822225	скадоската вай 150, 235 ставос с спартс		**************************************	exeraterent 200, 591 Stretterent	еантарктана 216, 638 кантадканатар	ekeranskera 233, 969 ettersker	252, 587	272, 502
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192, 305 1, 597, 612 295, 854 3, 328, 359 369, 818	18, 130, 236 18, 120, 236 7, 272, 094 	
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141, 350 1, 174, 283 217, 462 2, 445, 443 271, 827	3, 353, 016 1 5, 365, 016 1 5, 345, 207 5, 3457, 706	
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	Change in Forking Ca Change in Working Ca Change in Working Ca	oital per Ha bital per 0.4 Ha sital per 0.035 H			000	\$25, 955 250, 783 21, 944	50, 157 - 20, 063 - 1, 755			483 14,7 993 5,9 462 5,9	752 15, 3 901 6, 3 116		206 882 502	1	20,059 8,028 702	21, 675 8, 670 759	23, 405 9, 354 819	25, 282 10, 113 885	27. 304 10. 922 956
3.43 3.47 4.00 4.22 4.65 5.03 5.44 5.87 5.36 7.40 7.95 1.177,413 1.228,405 1.326,578 1.472,813 1.547,438 1.671.233 1.804,931 1.945,272 2.273,594 2.455,569 0 398,055 429,942 464,137 501,464 541,503 531,726 53,354 56,793 55,569 0 294,485 31,845 37,177 501,464 541,503 54,561 63,555 54,561 0 294,485 31,843 37,179 53,556 35,565 54,555 54,555 54,555 54,555 54,555 11,255 12,758 14,955 15,043 17,211 18,718 20,255 21,325 23,575 55,455 -53,785 55,455 -53,785 55,455 -53,785 55,455 -53,785 55,455 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 55,455 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 -53,655 -53,6	2008 15	2009 2010 16 17	2011 18	2012 19	2013 20	2014 21	2015 22	2016 23	2017 24	2018 25	2019 26								
1.137,413 1.228,405 1.325,578 1.432,813 1.547,438 1.571.223 1.804 931 1.945,225 2.273,584 2.455,569 0 398,055 429,942 464,337 501,484 541,603 584,921 531,726 582,264 736,845 795,793 859,455 0 29.488 31.848 34,395 37,147 40,119 43,328 46,795 56,538 54,561 58.946 53,553 -333,785 11.795 12.729 13,756 14,559 15,048 17,311 18,718 20,225 21,822 23,579 25,455 -333,782		3.70 4.00	4. 32	4.66	5.03	2.44	5.87	6.34	6.85	7.40	7.95								
631, 726 622, 264 736, 845 795, 793 859, 456 46, 795 50, 538 54, 561 58, 54, 563 18, 718 20, 215 21, 832 23, 579 25, 465	жжекиттттинициктопти 1.107,413 1.228	,406 1,325,578	1, 432, 813		1, 671, 233	1. 804, 931	1, 949, 326	2, 105, 272 2	2, 273, 694 2.	, 455, 589	0								
34, 395 37, 147 40, 119 43, 328 46, 795 50, 538 54, 581 58, 546 53, 553 13, 553 13, 553 13, 553 13, 351 18, 718 20, 225 21, 322 23, 579 25, 455 14, 555 15, 554 17, 321 18, 718 20, 225 14, 555 15, 554 17, 321 18, 718 10, 216 14, 554 15, 555 15, 556 15, 554 15, 555 15, 554 15, 554 15, 554 15, 554 15, 554 15, 556 15, 556 15, 556 15, 556 15, 556 15, 556 15, 556 15, 556 15, 556 15, 55	398, 095 429	. 942 464, 337	501, 484	541, 603	584, 931	631, 726	632, 264	736, 845	795, 793	859, 456	0								
	29.488 31 11.795 12 1.032 1	848 34, 395 739 13, 758 115 11, 204	37, 147 14, 859 1, 300	40, 115 15, 048 1, 404	43, 328 17, 331 1, 516	46, 795 18, 718 1, 638	50, 538 20, 215 1, 769	54, 561 21, 832 1, 910	58, 348 23, 575 2, 063	63, 563 25, 465 2, 228	-859, 455 -343, 782 -30, 081								

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infation index				1997	1992	1339	2000	2001	2002	2003	2004	2002	2005	2007
aflation Index 1.08 Receipt 1.04 ha of land Revenue from 0.4 ha of land Revenue from 0.5 Land		, 222030222228				0		0		- 4	17 1. :223755555555555555555555555555555555555	4	1000	41 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
icceit Revenue from 0.4 ha of land In-Use Value of Land Keenditure	1. 17	1.26	1.36	1.47	1.59	1.71	1.85	2, 00	2, 15	2.33	2.52	2. 72	2.94 3.17	3, 17
iroendi ture	12 11 11 11 11 11 11 11 11 11 11 11 11 1	4 Q 4 Q 4 Q 4 Q 4 Q 4 Q 4 Q 4 Q 4 Q 4 Q	0 2, 176, 782	2, 985, 675	2, 056, 589	2, 056, 589 2, 221, 115 2, 398, 805	2, 398, 806	2,590,718	2, 137, 367	3, 021, 804	2,590,716 2,797,967 3,021,804 3,263,548 3,524,532 3,805,603 4,111,131	3. 524, 632	3, 805, 603 4,	, 111, 131
Investment Investment Casense for 0.4 ha of land Casense in Working Capital In-Use Value of Land	34, 504, 008 C	716, 524 250, 783	773, 846 20, 063	153, 202 -248, 081	496, 274 50, 993	536, 084 5, 901	578, 971 8, 373	525, 289 6, 882	675, 312 7, 433	729, 337 8, 028	787, 584 8, 570	850, 698 9, 354	918, 754 10, 113	992.254 10, 922
4 11 11 14	талктакскитен±а; 0 -34,604,000	-967, 308			**************************************	a = = = = = = = = = = = = = = = = = = =	579, 131 1, 813, 462		2, 115, 222	2, 115, 222 2, 284, 440	2, 467, 195 2, 564, 570 2, 877, 735	467, 195 2, 564, 570 2	2. 877, 735 3, 107, 955	3, 107, 955
NCF per 0.4 ha(real) 0 -	0 -29, 667, 353	-767, 880	1, 016, 453	-767, 880 1, 016, 453 2, 096, 573	951, 066	951, 066 979, 757	979, 757	121.818	979, 757	979, 757 979, 757	979, 757	979, 757	979, 757	979,757
Net Present Value per 0.4 ha -6. 732.962		异草草 化丁基丁基乙基	ii ii ii ii ii ii ii ii ii ii ii ii ii			III AA Bi Bi Bi Bi Bi Bi Bi Bi Bi Bi Bi Bi Bi	- - - - - - - - - - - - - - - - - - -		* // 11 11 11 11 11 11 11 11 11 11 11 11	t 19 5 - J 1 11 11 11 11 11 11 11 11 11 11 11 11				
2008 2009 2010 2011 2012 15 16 17 18 19	12 2013 19 20	2014 21	2015 22	2016 23		2018 25	2019 26							
	55 5.03	рафинальний 5.44 	5.87			7.40	7, 95							

3. 356, 531 3, 625, 113 1, 915, 128 4, 238, 308 4, 931, 934 5, 926, 489 5, 752, 608 6, 212, 816 6, 709, 842 7, 245, 629 343, 782 979, 757 976, 757 979, 757 9700, 757 979, 757 979, 757 979, 757 979, 757 979, 757 979, 757 9770, 757 97700, 757 97700, 757 97700, 757 9 L 07L 635 1.157.365 1.243.955 1.349.951 1.457.947 1.574.583 1.700.550 1.836.594 1.982,521 2.142.203 2.313.579 1 11.795 12.738 13.758 14.659 15.043 17.301 18.718 20.215 21.832 23.579 25.465 -340.762

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CHECKDAN: 23

Table 5-2 : Net Cash Flow Table for Small Check Dam Year O	t Cash Flor T	able for Sa	all Check D)as 1983 1983	1994 1	1995 2	2 3851	¥ 1651	1996	1999	2000	2001 8	2002 9	2003 10	2004 11	20G5 12	2005 13	2007 14
Inflation Index				1.08	2×2×5×2×2×2×2×2×2×2×2×2×2×2×2×2×2×2×2×2	1, 26	1,36	1.47 1.47		анананананан] 1.71 станананан		infition index 1.0 1.1 1.26 1.36 1.47 1.59 1.71 1.85 2.00 2.15 2.3 2.52 2.72 2.94 3.17		2.33	2.52	2.72	2.94	3.17
Receipt Revenue from (In-Use Value o	sceipt. sceipt. Revenue from 0.035 ha of land In-Use Value of Land	and	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	64 8 9 10 11 11 11 11 11 11 11 11 11 11 11 11		0	190, 468	251, 247	179, 952	2 194, 348	s 209, 895	226, 687	244, 822	264, 408	285, 550	308, 405	333. 078	359.724
Expenditure investment Expense for 0.035 ha of land Expense in Morking Capital Change in Morking Capital	.035 ha of la king Capital of Land	pu		4	4, 265, 500 C	62, 895 21, 944	67, 712 1, 755	13, 405 -21, 707	41, 413 4, 462	3 46.907 2 516	7 50, 660 558	54, 713 602	59, 090 59, 090	63, 817 702	68, 922 759	74, 436 818	538 161 08	36, 822 956
NCF per 0.035 ha (nominal)	ha (nominal)	******			auersanzzzzzzzzzz		- * = = = = = = = = = = = = = = = = = =	======================================		7 145,924	1 158.578	sourcesterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiterreiter	185, 082	199, 858	======================================	233, 150	251, 802	.===*=***** 271. 946
MCF per 0.035 ha (real)	ha (real)			9 - 4	0 -4, 171, 382	-67, 190	80 88, 940	183, 450	83, 218	8 85, 729	9 85, 729	85. 723	85, 729	85.729	85.729	85.729	85.729	85. 729
serves of the second serves and serves and second value per 0.035 ha	desammansen I ue per 0. 035	i ha saat				国际其论计1111月1日代称4	н 0 0 0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	- 	2, 11 11 11 11 11 11 11 11 11 11 11 11 11	4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	x h 11 11 11 11 11 11 11 11 11 11 11 11 1	vet Present Value per 0.035 ha -2.184.523	4 9 9 9 9 9 9 9 9 1 1 1 1 1 1	4 19 19 19 19 19 19 19 19 19 19 19 19 19		1 1 11 11 11 11 11 11 11 11 11 11 11 11		11 11 11 11 11 11 11 11 11 11 11 11 11
2008 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 15 16 17 18 19 20 21 22 23 24 25 25	2005	2010 17	2011 18	2012 19	2013	2014	2015 22	2016 23	2017 24	2018 25	2019 26							
	**************************************						H 1 H H H H H H H H H H H H H H H H H H			7, 40 	7.99				·			
388. 502	388, 502 419, 582 453, 149 489, 401 528, 553 570, 837	453, 149	483, 401	528, 553	570, 837	616.504	665, 824	719, 090	776. 617 8:	838, 745	0							
93, 768 1, 032	23,768 101.269 109,371 118,122 127,570 137,776 148,728 1.032 1.115 1.204 1.300 1.404 1.516 1.638	109, 371	118.121 1.300	127, 570 1.404	137, 776 1, 516	148, 758 1. 638	150, 702 1, 769	173,558 1,910	187, 443 20 2, 063	202, 438 2, 228	-30, 031							
233, 702 317, 158 342, 574 369, 980 359, 578 421, 544 466, 068 503, 353 543, 621 587, 111 634, 060 30, 031	233, 702 317, 138 342, 574 359, 980 359, 578 431, 544	342, 574	жанаталынын 369, 980	353, 578	431, 544	466, 068		543, 621	587, 111 634, 080 30, 031	634, 080	30, 031							
85. 729	85, 729	85, 729 85, 729 85, 729	e5, 729	85, 729	85, 729 85, 729	85, 729	85, 729	85, 729	85.729	85.728	3, 765							
		1	1111			*******				***								

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DEMOPLOT:28 3. Estimated Indremental NPV for Demonstration Plot

Citarik Watershed Development Project Financial Analysis: 1 for Demonstration Plot

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Change from "Althout Project" Dry Farming without Terrace to "With Project" Demonstration Plot with Bench Terrace

lten	Annual Benefi from Cropping	ts & Costs tem	<pre><pre>CWith Project> D Ase Year Base Price</pre></pre>	L> Demonstrat Base Inc Duantity Pro	CWith Project> Demonstration Plot with Bench Terrace Base Year Base Increase in+ Total Item Price Buartity Productivity Value/Year	th Bench Te otal It Alue/Year	VBU	<pre><#ithout Project> Dry Base Year Base Price Ountity</pre>		Farming withou Increase in** Productivity	st Terrace Total Value/Year
жжиротатататата Sconomic Indicator		завяваяавоелля (Rp) слекка (Kg) воома (Maximun) все (Rp) воокласникатать (Rp) поска (Kg) вильи (Maxinuu) вола (Rp) плах (Benefit)	Rp) zauzsa) = u = a a a a (33)	asa (Ensi) ×aX)		wereeswaare Benefit)	(Rp) =====	(Kg) ===== (K)	axiaun)	8.
Domestic Inflation Rate Foreign Inflation Rate	5.0 25 35	đđy		1, 300 2, 565 1, 450	5888 8888	448 500 Ur 884, 925 Ma 500, 250 Ca	Ipland Paddy Ialze Jassava	900 900 200	2, 210 1, 450 6, 350	8888 9000	
Interest Rate (Saving)	44		25, 000 5, 000	8, 00 15, 00		200, 000 AI 80, 000 AI	200,000 Albizia. tree 80,000 Albizia. fire	25. 000 5. 000	0.00 0.00	6. n	
LXChange Kate per USS (Base Year 1992)	2. USU	Jack Fruit Avocado	200	2.500		1, 250, 000	ack Fruit	005	D .		
Discount Rate Total Investment Farmers' View Point	10. 01 9. 07	(note*) Total Benefits Increase caused by Agricultural Input Increase caused by Soil Conservation	Tot by Agricu by Soil C	Total Benefits [cultural Inpu [Conservation		4, 111, 175 (note++) 5, 0% [note4+) 10, 0% Increas		d by Arric	iltural input Conservation	μ	1. 415, 500 0. 0 0. 0
Investment Cost	•	(Cost) [Seeda]				80	(Cost) [Seeds]				
Terrace and Others(1st year)	526, 000	Upland Paddy Red Beans	650 1.750	40 70	26,000 140,000	53	Upland Paddy Maize	650 3. 500	40 20	26, 000 70, 000	
Maintenance Cost(2nd yr) (after 2nd yr)	28. 05 10. 05	Maize Soy Beans	5. 50 000 000	52	52, 500 48, 000	G	Cassava O	5	3, 500	10, 500	
Maintenance of Existing Terrace		Albizia tree Jack Fruit	1.030	100	10,000	~ `	Albizia. tree Jack Fruit	100 250	.	00	
morking Capital	* 0-0	Avocado No.of tree 1 [Fertilizers]	types =	100 2 ty	1/3. UUU types	-	No. of tree types = [Fertilizers]	types =	0 types	22	
With Project	35, 0% 70, 0%	Manure Chemical Lime	300 250 250	10, 000 690 0	500, 000 180, 000 0	201	Manure Chemical Lime	300 250 250	5, 000 500 0	250, 000 150, 800 0	
In-Use Yalue of Lend	5	[Pesticide] Cairan Butiran	20, 000 3, 000	204	80, 000 60, 000	-0#	[Pesticide] Cairan Butiran	20, 000 3, 000	102	40, 000 30, 000	
Benefits and Costs from Animal H Unit Price No. summersummers (Rp) servers	Animal Husbandry Price No. of Sheep/Ha p)===========(8p)====== p)=======(8ep)======(8p)============================	Labor Cro	3, 000	80	270,000	ы <u>-</u> т	[Labor] Labor Cost Crop and	3, 000	200	600,000	
- •	3.8 255,000 3.8 255,000	Tre Kel	3, 000 nd	5 40.0% of	15,000 f costs		vegetable Tree Maintenance an	3, 000 and	0 40.0% of	. D costs	
		o narvesting 0 (Others] Agrícultural Equipment	uipment		20, 000		lothers] Sgricultural Equipment	e . quipment		50, 000	
				n N	***********				141		

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DEX0PLOT:28

Table 3-1: Revenue and Expense(1/2) (With Project) Demonstration Plot with Bench Terrace

		æ.	-		1	4	6	\$	2	*	5	10	1	12		14	11	16
Inflation Index		1.08 1.17 1.2	1.17	1, 26	1. 36	1.47	1.59	1. 71	1. 85	2.60	2.16	2.33	2.52	2.72	2.94	3.17	3.43	3. 70
Revenue Revenue 1)Gross Yalue of Production			000				A 10 33	718 523	67U 764	206 554	46.8. 27.8	1 045.740				71.0		
Parte (1)	r#009 Ce Ce Tel: Tel: Tel: Tel: Tel: Tel: Tel: Tel:		122 220	378	408	141	114	514	1999 1999	600	648	689	155	818 818	188		1. 240. 245	1. 655. 458 1. 110
	unange in Frice Quantity		83	1, 365	1, 365	1, 372	1.378	1. 295	1.430	1, 495	1, 495	1. 495		1, 435	1, 435	1. 455	1.495	1, 495
(Z) Red Des Pri			350	L, U17, 815 378		1, 152, 534	I. 294. Job 475	L. 417. 05/	17, 200, 120	1. 1 00. 307	. 979 970 - 776 - 7	659 675 mgn 7	4	818	128 128		20/ 101 r	2. Z76, Z35 1. 110
ប៍ ភ្នំ	Change in Frice Quantity		1, 347	0 2, 593	0 2. 693	0 2.705	2.719	2, 757		2, 950	2, 950	0 2, 350	2, 350	0 2, 950		2, 950 2, 950	2, 950	2.350
(3) Maize Price	5		266, 377	575, 373	621, 403 408	674, J11 441	731.703	801, 427 514	885, 670 555	1. 000. 002 500	1, 080, 002	1, 155, 402 599	1. 259. 715 755	1. 360. 492 815	1. 465, 331 881	1, 586, 878 952	1, 713, 526 1, 025	1, 850, 934
52	ange in Price		0.1	0		0 2 2	0 1 1	1033	1 505	•	1.668	0 1. 668	1 568	0 1 558		0 653	0 2 2 2 2 2 2 1	
(4) Soy Bea	(4) Soy Beans		198, 034	859, 753	928, 534	1, 607, 592	1 090, 355	1, 197, 535	1, 323, 415	1. 494, 256	1, 613, 796	1. 742, 900	L, 842, 312	2, 032, 919	2. 195, 552	2. 371, 196	2. 560, 292	2.785.75
10	.ce. ange in Price		I. 156	1, 250	1, 360	. 1, 459	1.587	1. 11	1, 631	4	5013	10 · · ·	014 17	07/ 7			47 7 7	101 °C
Qua VS: Athiria	Quantity (5) 11hirin tree		341	683	583	989 0	683 1 SR6 874	663	115	743	748	748 2. 331. 539	748	748	748	748	748 3. 425. 343	2
	rice		29, 150	31, 453	34, 012	36, 733	39, 672	42, 846	46, 273	49, 275	53, 973	58, 291	62, 954			15, 304	เก้ อา	92, 500
Quantity	ntity rive		Ð	•		0	40	6	ы.	~	0	40		04	••	8	40	
Pri	1.1276 CC		5, 832	6. 299	6, 302	7, 347	7,934	8, 569	9, 255	3, 505	10, 795	11, 658	51		14.585	15.861	17. 130	18, 500
0.50	Change in Price Duantity		. c	e	-	0	. 80	0			Ð	09 9		Ð	0	0	02	•,
(7) Juck Fr			50,50		003	115	193	357	.5Z6	000 7	21. 079	1, 156	1.259	1.360	0 1.469	1.585	1, 713	1.250
6	Change in Frice	•									c			•				
404 (8) Avocado					-	00	-	856, 912	1. 388, 198	1, 999, 005	2, 698, 656	2, 914, 549	3. 147. 713	3, 399, 530	3. 671. 492	3, 365, 211	4. 282. 428	4. 625. 023
12	ice la Price		583	630	660	735	262	857	325	1, 000	-1	1, 155		-1	1. 469	1, 535	1, 713	1, 85(
Qua Total Revenue	Quantity	- 4	0	2, 968, 795	. 205, 298	0 3, 479, 292	0 5, 937, 068	1, 000	1, 500 5, 958, 052	Z, 000 7, 158, 785	2, 500 8, 271, 219	2, 500 12, 197, 212	2, 547, 550 3, 647, 550	2. 500 10. 419, 354 1	2, 500 11, 252, 903 1	2, 500	2. 500 17. 921. 705	2, 500
2010	2011 2012 18 19	2013 20	2014	2015	2015	2017	2018	22		· ·								
4.00	4. 32 4. 86 5. 03 5. 44	S. D3	5, 44	5.67	6.34	6,85	.7.40	7, 33										
						а 21 г.			•									
1, 752, 215 1, 935, 592 1, 199 1, 295	35, 592 2, 090, 439 1, 295 1, 398	2.257.674	2. 257.674 2. 438. 238 1. 510 1. 531	2, 633, 351	2, 844, 020 1, 902	3, 071, 541 2, 055	3, 317, 264	1 y.										
1.495	0 0 1.435 1.495	1.495	1 49				1.435											
3, 536, 178 3, 819, 072 1, 139 1, 295	19.072 4.124.598 1.295 1.393	4, 124, 538 4, 454, 565	4. 810, 93		5. \$11, 469	5, 050, 387 2, 055	6, 545, 218 2, 219		. '									
0 950	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2. 9Sn	, e5	0 450			0 2.950											
1, 399, 009 2, 1	2, 158, 529 2, 331, 644 1, 295 1, 398	2, 518, 17	2, 719, 62	2. 937, 200	3, 172, 176	3, 425, 950	2, 700, 025 2, 219		•									
								•										
2, 957, 025 3, 225, 987	3, 484, 065	3, 752, 791	4, 062, 814	4, 388, 919	4, 740, 033	5, 119, 235	5, 528, 774											
		5																
		5, 033, 834					7, 356, 353											
1 006 86	116.524	125.845	135, 914		-				•									
000	0 0 1 1 1 1 1 1 1 1	2, 013, 533	00 ; ;		00;	200	2,955,54]											
۰.	-						5											
-		301			3 G .													
	261 17		ot. 7	875. Y		÷												
4,995,024 4,3	4, 315, 701 4, 650, 957 2, 158 2, 330	5.033,834 5.435,540 5.871,454 2.517 2.718 2.935	5, 435, 540	5, 871, 464 2, 936	6, 341, 181	6, 848, 475 3, 424	7, 396, 353											
		1				;												

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Table	Table 3-2: Revenue and Expense (2/2)	·	<pre><#ith Project> Demonstration Plot with</pre>	Demonstrati	an Plot ∓it	Bench	Terrace												
	Year		1993	1894 1	1995	396	1997	1998	993	2000	2007 8	2002	2002	2004	2005 12	2005	2007	2008	
			Sub-total	371.207 15,163	335, 713 32, 753	362, 570 35, 373	391, 575 38, 203	422.902 41.259	473.872	493, 273 48, 124	532, 735 51, 974	575, 354 55, 132	621, 382 60, 623	\$35, 274 \$5, 472	724. 780 70, 710	782, 762 75, 367	845, 382 82, 476	913.014 89.075	1. 023. 56.
	change in price Red Beans	rice .		81. 648	175, 360	190, 468	205, 706	222. 162	239, 935	253, 130	279, 861	302, 249	325, 429	352, 544	380, 747	411,207	444, 104	479, 532	518, 003
	change in pi Maite			39, 518	85, 135	71, 425	77, 148	83, 311	53, 975	97.174	104, 548	113; 344	122, 411	132, 204	142, 780	154, 203	156, 539	179, 852	194, 251
	Soy Beans		•	27, 994	60, 466	65, 303	70, 528	76.170	82.264	88. 845	95. 952	103.628	111, 919	120, 372	130, 542	140, 985	152, 264	164.445	177, 501
	Albizia. tree change in price Jack Fruit	-ice		11, 664	0	0	5	Ъ.	17, 138		0	0	e	25, 182	0	Ð	9	Ð	37, 000
	change in price Avecado	rice	- 1	204,120															
	2)fertiliters Nanure Chemical		Sub-total	396, 576 291, 600 104, 976	856, 604 629, 856 226, 748	925, 132 680, 244 244, 888	898, 143 734, 554 264, 479		1, 165, 401 856, 912 308, 438		1, 359, 323 999, 502 359, 821	1, 468, 053 1, 079, 462 388, 506	1, 585, 515 1, 185, 819 419, 695	1, 712, 355 1, 255, 085 453, 271				2, 329, 541 1, 712, 971 615, 570	2. 515, 012 1. 850, 009 655, 003
	Lime 3) Pesticide Caireo	Sub	Sub-total	81. 548 81. 548 46 555	176, 350 176, 350	0 190,468 108,819	0 205, 706 117, 546	222.162 222.162	239, 935 117 106	259,130 148 074	279, 851 159, 851	0 302,249 - 177 714	0 326, 429 186 531	352, 544 261, 454					
	<pre>%)Labor Cost %)Labor Cost Crop & Yegetable 7ree 5)Others</pre>		Sub-total	24, 992 24, 992 174, 960 17, 496 58, 320	75,583 340,122 340,122 62,986	58, 529 58, 529 56, 355 56, 355 58, 35	38, 160 38, 160 395, 719 2, 545 73, 456	428.455	520, 771 550, 771 550, 771 55, 039 55, 691	111.056 586, 375 866, 624 22, 547	119, 940 538, 770 122, 739 950, 950	129, 535 746, 988 582, 910 164, 078 107, 946	139, 898 847, 551 829, 543 218, 008 115, 582	151,090 830,173 830,173 879,905 210,267 125,909	163, 177 940, 998 734, 298 206, 691 206, 691	1,016,232 1,016,253 793,042 223,227	190, 330 1,097,571 241,085 153,608	1, 245, 557 1, 245, 350 326, 326 320, 326 171, 247	1, 207, 556 295, 005 308, 005 155, 005
	каккаленаны килопистичини килопистии Тоtal Expense			1, 082, 711 1	1, 771, 785 1, 91	5, 150	2, 069, 255	2, 263, 518	2, 455, 671	2, 689, 957	2, 934, 339		3. 497, 458	8.777,255	4, 031, 842	4, 354, 390	4, 702, 741	анананалан 5. [38. 5]4	S.550. 027
	Met Income surradetkommonpetda		251, 131, 121, 121, 121, 122, 131, 131, 13	291, 731	1, 197, 010	1, 138	1, 410, 037 	3, 733, 550 2.	495, 421 25 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3, 268, 095 4, 224, 447	4, 224, 447	5, 070, 613	8, 599, 753 	5, 370, 295	6. 387, 512 	6, 838, 513 • ***********	7,450,394 I	12. 782. 792	8, 625, 330
	2010 2011 17 18	2012	2013 20	2014	2015	2016 23	2017 24	2018 25	2019 26	·									
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	559, 443 604, 198	5 52, 534	704, 737	761, 116	822, 005	B&7, 765	958, 787	1, 035, 489											
	209.791 226,574	244. 700	264, 276	285, 418	308, 252	332, 912	353, 545	388, 309											
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	776, 826	638, 972 	306, 030	978, 577 978, 577	1, 056, 863 0 828, 865		1, 232, 726	1, 331, 344											
	145 256 258 942	372, 877 279, 557	402, 707 302, 030	434, 923	352, 288 352, 288		547 878 547 878 410, 909	1, 013, 489 591, 738 443, 781											
	1, 382, 623 1, 430, 223 1, 078, 925 1, 155, 239 303, 637 284, 984 199, 601 215, 785	1, 544, 641 1, 258, 458 286, 183 233, 048	1, 755, 305 1, 359, 135 251, 692 251, 692	1. 842. 444 1. 467. 866 374. 578 271. 827	1, 945, 803 1, 585, 295 360, 508 293, 573	2, 101, 467 1, 712, 119 389, 348 317, 059	2, 259, 585 1, 849, 088 420, 495 342, 424	2, 580, 588 1, 997, 015 583, 572 368, 818							•				
	акканиеттии. 5, 924, 099 6, 335, 018	ынакатта 6, 841, 819	7, 477, 257	жинатание и волиции в в 1015, 437 8, 618, 721 9, 3	8, 618, 721		10, 052, 877	10, 936, 543											
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Total and Maintenance Schedule Official and Schedule O		2.15 2.33 2.52 2.72 2.94 3.17 3.45 3.70	36, 248 1D3, 348 112, 264 121, 245 130, 345 141, 420 152, 734 154, 553 178, 149 152, 401					
Investment and Maintenance Schedule 133 194 71th Project Demonstration Plot with Manch Terrace Year 133 194 133 194 5 6 201 Year 108 1.17 1.28 1.36 1.47 1.59 1.71 1.8 Inflation index 1.08 1.17 1.28 1.36 1.47 1.59 1.71 1.8 Terrace and Maintenance 1.08 1.17 1.28 1.36 1.47 1.59 1.71 1.8 Terrace and Others (ist year) investment 066,528 131,010 70,745 76,405 82,517 89,119 96,26 Terrace faint transce 501,6 201,4 20,745 76,405 82,517 89,119 96,26 2010 2011 201 201,45 70,745 76,405 82,517 89,119 96,26 2010 2011 2012 211 212 213 201 214 25 26 26 26 26 26 26 26 26 26 26 26 26 26 <		2.00	3 103, 948	3 103, 948				
Invertent and Maintenance Schedule (Tith Project) Demonstration Plot tith Back Terrace Year 133 135 1395 1395 1395 139 147 159 171 Terrace and Maintenance 1.08 1.17 1.28 1.35 1.47 1.59 1.71 Terrace and Maintenance 1.08 1.17 1.28 1.35 1.47 1.59 1.71 Terrace and Maintenance 10.08 1.17 1.28 1.35 1.47 1.59 1.71 Terrace and Maintenance 10.08 1.17 1.28 131,010 70,745 76,405 82,517 89,119 Terrace and Maintenance 5012 2013 2014 2015 70,745 76,405 82,517 83,119 Terrace flaintenance 5012 2013 2014 2015 70,745 76,405 82,517 83,119 Terrace flaintenance 11 11,010 70,745 76,405 82,517 83,119 2010 201 202 21 203 24 5,27 203 24 5,37 201 <td< td=""><td></td><td>1.85</td><td>35, 248</td><td>96, 241</td><td></td><td> m !!</td><td></td><td></td></td<>		1.85	35, 248	96, 241		m !!		
Investment and Maintenance Schedule (Tith Project) Demonstration Plot tilh Bench 1 Year 123 133 147 15 Inflation Index 1.08 1.17 1.28 1.35 1.47 1.59 Inflation Interstate 1.08 1.17 1.28 1.35 1.47 1.59 Inflation Interstate 501 201 7.46 22 23 24 25 201 201 201 201 22 23 24 5.6 5.7 4.05 201 201 202 5.44 5.37 7.46 25 23 7.46 201 203 24 5.37 5.44 5.34 5.6 26 24	errace 1999 6	1.71	89, 119	89, 119 26, 119 26, 119		7.99		
Invertent and Maintenance Schedule 133 135 1395 1395 Year 10 1 25 1395 1395 Near 1.03 1.17 1.25 1.35 1.47 Inflation Index 1.08 1.17 1.25 1.35 1.47 Terree and Others(14 year) Investment 605,528 131,010 70,745 75,405 Terree and Others(14 year) Investment 605,528 131,010 70,745 75,405 Terree and Others(14 year) Investment 605,528 131,010 70,745 76,405 Terree and Others(14 year) Investment 605,528 131,010 70,745 76,405 Terree and Others(14 year) Investment 605,528 131,010 70,745 76,405 Terree and Others(14 year) 2012 2013 2014 22,22 23 2010 2011 17 22 23 24 5,57 5,34 5,612 2017 202 5,44 5,67 5,34 5,612 22,121 201,753 224,415 24,155 224,713 126,121 2017	ith Bench 7 1998 5	1.59	82, 517	82, 517	2018	7.40	384, 610	
Investment and Maintenance Schedule 193 195 195 Year 10 1 1 1 1 25 195 Inflation Index 1.08 1.17 1.25 1.38 1.33 Inflation Index 1.08 1.17 1.25 1.38 1.33 Inflation Index 1.08 1.17 1.25 1.38 1.33 Terree and OtherS(14 year)Investment 06.528 131,010 70,745 75 Terree and OtherS(14 year)Investment 06.528 131,010 70,745 75 Cotal Annual Investment 0015 201 201 201 201 2010 2011 2012 2013 2014 70,745 23 2010 2011 201 201 21 20 23 23 2010 2011 2012 2013 2014 22 32 23 2017 202 203 24 5.37 5.34 32 74 2017 203 24 5.32 74 5.37 53 74 <td>ttion Plot ▼ 1937 4</td> <td>1.47</td> <td>76, 405</td> <td>76, 405 188435455460</td> <td>2017</td> <td>5, 85 </td> <td>356, 121</td> <td>356, 121</td>	ttion Plot ▼ 1937 4	1.47	76, 405	76, 405 188435455460	2017	5, 85 	356, 121	356, 121
Investment and Maintenance Schedule 153 194 Theyster Year 1 0 1 2 1 1 2 1 1 2 1 2 1 2 1 2 1 1 2 1 1 1 1 1 2 1 <td< td=""><td>> Demonstra 1995</td><td>1.35</td><td></td><td></td><td>2016 23</td><td>5. 34 seseretere</td><td></td><td>329,741</td></td<>	> Demonstra 1995	1.35			2016 23	5. 34 seseretere		329,741
Investment and Maintenance Schedule 133 134 Year 106 1 1 Inflation Index 1.08 1.17 Infraction Index 1.08 1.17 Terree daintenance 1.08 1.17 Terree daintenance 1.08 1.17 Cotal Amual Investment 06.528 201 Terree daintenance 201 201 2010 2011 2012 203 2010 2011 2012 203 2010 2011 2012 203 2010 2011 212 203 2017 13 203 5.44 2017 224 416 242.370 251.759 282.700 207.793 224.415 242.370 251.759 282.700 200	ith Project 1985 2	1.25	131,010	131,010 ·	2015	5, 87	305, 316	305, 316
Investment and Maintenance Schedule 193 Year 106 Inflation index 1.08 Inflation index 1.08 Terree and Others(ist year) investment 1.03 Terree Maintennec 1.03 Octal Annual Investment 1.03 Otal Annual Investment 1.0 Otal Annual Investment 1.0 Otal Annual Investment 1.0 201 201 201 203 24, 416 242, 370 281, 759 207 224, 415 242, 370 281, 759	1994 1	1.17	606, 528	606,528 4405,428		5. 44	282, 700	282, 700 200×00×00
<pre>Investment and Maintenance Schedu Year Inflation index Terree Maintenance Terree Maintenance Terree Maintenance Terree Maintenance Terree Maintenance 2010 2011 2012 2012 2010 2011 2012 2012</pre>	te 1593	1.08	es ĉ e ci ĉ		2013 20	5.03	251,759	261, 759
Terrestant and Maintena Tear Terres and Others(15 Terrest Maintenance Terrest Maintenance 2010 2011 17 2010 2011 2010 2011 2017 393 224,415 207,793 224,415	nce Schedul		t year) Invi		2012 119	4.66	242, 370	242, 370 ==========
Tear Tear Inflation In Inflation In Inflation In Inflation In Zoin Zoin Zoin 2010 2010 4.00 4.00 207 207,793 207,793	nd Kaintena	dex	d Others(ls tenance	Investaces seascestee	2011 18	4. 32	224, 416	224, 416 303±335052
	Invest ae nt a Year	inflation in	Terrace Main'	Total Annual Total Annual Totaresworter	2010 17	4. 90	207, 793 *************	207, 793 ***************

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Table 5: Working Capital CWith Project> Demonstration Plot with Beach Terrace

		1933 0	1004	1995 2	1996	1997	1998	1999	2000	2001	2002 9	2003	2004	2005 12	2005	2007 14	2008 15	2002
Inflation Index	inflation index 1.26 1.28 1.17 1.26	1.08	1.17	1.26	1.35	1.47	1.36 1.47 1.59 1.71	1. 71	1. 85 2. 00	1. 85 2. 00	2.15	2.16 2.33 2.52 2.72 2.94 3.17 3.43 3.70	2.52	2. 52 2. 72	2.94	3.17	3. 41	3. 70
Operational Expenses excluding Labor Cost	Provident Expenses Presional Expenses President Labor Cost		849, 431	1, 368, 677	. 478, 171 1	.596, 425	, 724, 139	879, 208	, 011, 036	2, 171, 919 4	. 345, 672	849,431 1,368,677 1,478,171 1,586,425 1,724,139 1,879,208 2,011,038 2,171,919 2,345,672 2,533,325 2,761,174 2,554,871 3,191,261 3,446,562 3,722,287 4,057 070	761, 174	2, 554, 871	3, 191, 261	446, 562	722,287	1, 057, 070
Forking Capital required	required	Ð	297, 301	297, 301 479, 037	517, 360.	558, 749	503, 449 557, 723	657, 723	703, 862	760, 171	820, 985	885, 664	566. 411	1, 034, 205	886,664 \$566,411 1.034,205 1,116,941 1.206,257 1.302,800 1,419,974	. 206. 257	302, 800	1, 419, 974
Change in Working Constant	ng Capital	0	297, 301	227, 301 181, 736	38. 323	41, 383		44.700 54.274	46. 140	46.140 55.309 60.814	60, 814		79, 747	167 794	65, 579 73, 747 67, 794 82, 736 83, 355	83, 355	96, 504	117.174

1, 519, 586 1, 641, 153 1, 772, 445 1, 914, 241 2, 085, 408 2, 232, 771 2, 411, 393 2, 504, 304 2, 812, 648 0 99, 612 121, 557 131, 232 141, 795 172, 157 146, 363 178, 622 152, 911 208, 344 -2, 512, 648

99,6j2 121,567 131.292 141.796 172.167 146.363 178,622 192.911 208,344 -2.512,648

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	1933	1		1595	: i	1897 4 -	1938	1995 1997 1998 1999 2 3 4 5 5 5	2000	2001	2002	2003	2004	2005	- 1	2006	2006 2007 13 14
Inflation Index 2 1.28 1.17 1.28	1. 08 	1. 1.	1.17	1. 26 **********	1.36	L. 47	1.59	1. 71 *********	1. 35	2,00	2. 16 **********	2. 33 Farrent	2, 52	2.72		2.34	L 36 L 47 L 59 L 71 L 85 Z .00 Z 16 Z .33 Z .52 Z .72 Z .54 Z .17 Z .43 3.70
Recipt Gross Value of Agricultural Production 1,374,442 2,568,795 3,206 In-Use Value	ural Producti	on 1.374.	142 2.96	8, 795 3, 2	06, 298 3,	3, 479, 292	5, 997, 058 4, 992, 092	4, 992, 092	5, 958, 052	5, 958, 052 7, 158, 725	8. 271, 219	12, 197, 212	9, 547, 550	10, 419, 354	11, 25	2, 903 1	12, 197, 212 9, 647, 550 10, 419, 354 11, 252, 903 12, 153, 135 17, 921 705 14, 175, 417
Expenditure Investment Anthemmark Sponse Generating Coppital Change in Working Capital In-Use Value of Land	a 1	606,528 0 0 A.082,711 0 297,301 0		131,010 76. 1,771,785 1,915. 181,736 1,938.	76. 745 115. 160 2. 38. 323	76, 405 069, 255 41, 389	2, 253, 517 44, 700	2, 495, 871 54, 274	26, 248 2, 688, 957 46, 140	103, 348 2, 934, 339 55, 309	3, 200, 264 50, 806 50, 814	121, 245 3, 437, 458 65, 679	3, 777, 255 4 79, 747	141, 420 , 031, 942 67, 794	4, 354 82	152, 734 4, 354, 390 82, 736	.734 164.953 173.149 .390 4.702.741 5.138.914 .726 4.925 96.534
иколикальные и правление и п NGF-#1th Case(Rominal) 0 -612, 098 884, 264 1, 182	19 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		198 83.	4, 264 1. 1		292, 243	3, 506, 333	2, 353, 028		4, 064, 185	3, 506, 333 2, 353, 028 3, 125, 707 4, 014, 189 4, 897, 505	жентекимент 8, 512, 829		6.178.238	. 663 6. 663	. 043	00,000 1,222,243 3,606,333 2,353,028 3,125,707 4,064,189 4,897,535 8,512,829 5,653,604 6,178,288 6,663,043 7,196,086 12,508,139 8,315,815
NCF With Case (Real) 0 -524, 775 701, 957 868, 456 879, 479 2, 272, 501 1, 372, 968 1, 688, 722 2, 023, 106 2, 265, 506 2, 279, 506 2, 263, 506 2, 263, 506 2, 262, 205		0 -524,7	775 70.	1, 957 8	58, 856	879, 479	2, 272, 501	1, 372, 969	-524, 775 701, 957 868, 856 879, 478 2, 272, 501 1, 372, 968 1, 688, 722 2, 032, 108 2, 268, 506	2.033,106	2, 258, 505	3, 551, 005	2, 241, 505	2, 271, 747	2.258	208	3, 551, 005 2, 247, 505 2, 271, 747 2, 268 505 2, 258, 505 2, 551, 005 2, 247, 505
Ret fresent value 2010 2011 17 18	2012 2012 2012 2012 2012 2012 2012 2012	2013 2013 20	2014 21	2015	2016 23	2017 24	2018 25	2019 26	·	÷.,							
4.00 4.32 4.66 5.03 5.44 5.87 6.34 6.85 7.40 7.99	4, 66	5.03	5.44	5 87	6.34	6.85	7,40	7.39	,								
15, 209, 450 15, 455, 281 15, 691, 703 25, 074, 407 19, 469, 203 21, 026, 739 22, 708, 878 24, 525, 588	. 691, 703 25, 07	4, 407 19, 46	9, 203 21, 0	26, 739 22,	708, 878 2	1, 525, 588	36, 842, 530						:				
207,733 224.415 242.370 251,759 282.700 305.315 2. 5.924.099 6.335.018 6.841.819 7.477.257 8.075.437 8.618.721 9.31 93.612 1.21.567 1.31.232 1.41.795 1.72.167 146.363 1	242, 370 24 841, 819 7, 47 131, 292 14	51, 759 28 77, 257 8, 07 11, 796 17	2, 700 3 5, 437 8, 6 2, 167 1	05, 316 18, 721 9, 46, 363	329, 741 308, 218 10, 3 178, 622 1	55, 121 52, 877 92, 911	384, 510 386, 543 208, 344	384, 610 986, 543 208, 344 -2, 812, 548				·					
3.077,346 8.774.280 9.476.222 17.153.585 10.338.838 11.956.139 12.832.286 13.923,479 25.251.032 2.812,548 2.211.747 2.023.106 2.023.106 3.415.506 352.106	476, 222 17, 15 033, 105 3, 41	33,595 10,93 13,595 10,93	2, 106 2, 0	156, 339 12. 156, 339 12. 16, 347 2.	892, 296 1	3, 523, 579 2, 033, 106	25, 263, 032 3, 415, 606	2, 812, 548									

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3.70 0 92,500 18,500 18,500 2003 16 1. 509 1. 509 1. 10 1. 114 1. 114 1. 114 1. 155 1. 185 1. 2.453.112 1.110 5.237.376 2005 2006 2007 2008 12 13 14 15 2.72 2.94 3.17 3.43 1, 490, 285 1, 490, 285 1, 028 1, 028 1, 450 1, 450 1, 450 1, 151 0 85.649 1.713 4. 849, 422 2. 271. 400 s. 350 17.130 2, 103, 148 2.210 1.379.894 4.490.205 1, 450 1, 007, 164 159 s. 350 79, 304 15.851 1.585 1. 347. 359 881 1, 277, 575 881 1, 450 932, 559 147 73, 430 14. 585 1.469 4, 157, 598 6, 350 2.250 1.183.036 815 1.803.111 816 13, 598 1.350 0 67, 991 1, 450 853, 481 136 6, 35<u>0</u> 2003 2004 20 11 2. 33 2. 52 1, 669, 547 755 1. 095. 404 0 82,954 0 12, 591 1, 259 3.554.470 1, 450 739, 519 126 8, 350 ь 11, 658 1, 166 3, 300, 435 L. 545, 877 699 2, 250 1, 014, 263 699 6, 350 58, 291 1, 450 740, 255 2001 2002 8 9 2.00 2.16 0 0 53, 973 L. 079 1. 431. 367 2, 210 939, 132 848 10, 795 1, 450 685, 459 108 6, 350 3, 055, 958 1, 325, 340 600 0 49, 975 1. 000 s. 395 2, 210 859, 557 600 1. 450 634. 684 100 5, 350 2.829.531 2000 1, 227, 167 2, 210 805, 155 555 45, 273 9, 255 1, 450 537, 670 6. 350 925 199.702 1938 1958 5 5 1.59 1.71
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	Table	

7-2: Revenue and Expense (2/2)		Afithout Project) Dry Forming without Te	ct) Dry fac	∎ing without	t Terrace		•		•									
Year		1993 0	1994	1995 2	1996 1	1997	1998- 5	9 8681 .	2000	2001 8	2002 9	2003 10	2004	2005 12	2006 13	2007 14	2008 15	500Z
Expenses 1) Seeds Upland Paddy		Sub-total	62, 111 15, 163	134, 159 32, 753	144, 892	156, 483 38, 203	159,002 41,259	182, 522 44, 559	197, 124 48, 124	212, 394	229, 926 56, 132	248, 320	268.185	289, 640 70, 710	312, 811 76, 357	337.835 32,475	364.863	394. 052 354. 200
Change in Price Maize	Price		40, 824	88, 180	95, 234	102, 353	111, 081	119, 968	129, 565	139, 930	151, 125	163, 215	176, 272	190. 374	205, 604	222, 052	239.815	253, 001
Change in price Cassava Change in price	price	•	6, 124	13, 227	14, 285	15, 428	15, 662	17, 995	19, 435	20, 990	22, 669	24, 482	26.441	28, 556	30, 841	33, 308	35.972	33, 850
Glange in price			0	Ġ	0	0	5	D	0	•	8	0	Ð	0	0	Ð	÷	
change in price Albizia, tree	Price Sefer		0	0	0	Ð	0	0	0	0	0	0	0	G	0	0	0	
Jack Fruit Change in Price	price	•	0					•										
9			0															
2)Fertilizers Manure Chemical		Sub-total	273, 280 145, 800 87, 480	503, 885 314, 928 188, 957	544, 196 340, 122 204, 073	587, 731 367, 332 220, 399	634, 750 396, 719 238, 031	685, 530 428, 456 257, 074	740, 372 462, 733 277, 640	799, 502 499, 751 299, 851	863, 570 539, 731 323, 839	932, 558 582, 910 349, 746	1, 007, 268 829, 543 377, 726	1, 087, 849 1 579, 906 407, 944	1. 174. 877 734. 298 440. 575	1. 268, 868 793, 042 475, 825	1, 370, 377 855, 485 513, 891	1, 480, 007 925, 005 555, 003
3)Pesticide Cairan		Sub-total	40. 824 23. 328	88, 180 50, 388	95, 234 54, 420	102, 853 58, 773		119, 968	129, 565		151, 125 86, 357		178, 272 100, 727					259.00 148.00
Butiran 4)Labor Cost Crop and Vegetable		Sub-total	17, 495 349, 920 349, 920	37, 791 755, 827 755, 827	40, 815 816, 293 816, 293	44,080 831,597 881,597	47, 606 952, 125 952, 125	- 51, 415 1, 028, 295 1, 028, 295	55, 528 1, 110, 558 1, 110, 558	59, 970 1, 199, 403 1, 199, 403	64, 768 1, 295, 355 1, 295, 355	59, 949 1, 338, 983 1, 338, 983	75, 545 1, 510, 902 1, 510, 902	81, 589 L. 631, 774 - 1 L. 631, 774 - 1	88. 116 1, 762, 316 1, 762, 316	95, 155 1, 903, 301 1, 903, 301	102, 778 2, 055, 566 2, 055, 566	111, 001 2, 220, 011 2, 220, 011
5) Others			58, 320	0 62, 985	58.024	73, 466	79, 344	85, 691	92, 547	99, 950 0	107, 945						171.297	185.001
HANGGARAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		异体适应自己的现在分词	744. 455	1. 545. 037 1. 668. 640	8.640		1.946,301 2.102,005	2. 102, 005	2, 270, 165 2, 451, 779	2, 451, 779		2, 853, 755			3, 602, 468	жателетеление калала 602.468 3.850.555	4. 201. 519 4. 538. 072	4, 538, 072
Ret Decome 81, 065 238, 086 257, 132 277, 703	一番目的世界的学校和实际	*****	81.065	238,085	257, 132	277, 703	299, 919	323, 913	349, 826 ************	377, 812	408, 037	440, 680	475, 934	514, 009 555, 150 593, 540 647, 503 849, 303	555; 130.	599, 540	647, 503	599, 303 202 , 293
2010 20	2011 2012 18 19	2 2013 9 20	2014 21	2015 22	2016 23	2017 24	2018 25	2019 26			· .			·				
425, 576 459, 622 103, 897 112, 208	122 496, 322 108 121, 165	2 536,103 S 130,880	578, \$92 141, 350	625, 311 152, 658	675, 336 154, 871	729, 363 178, 060	787, 712 192, 395											
279, 721 302, 093	33 325, 267	7 352, 368	380, 558	411,002	443, 883	479, 393	517.745											
41, 558 45, 315	15 48, 940	0 52, 855	57, 084	81, 650	55, 582	71, 909	77. 662											
e	0	0	0	0	0	0	0											
a	0	0	0	D	0	o	Ð											

1. 598, 408 1. 255, 280 1. 884, 333 2. 013, 533 2. 174, 615 2. 348, 565 2. 556, 472 2. 739, 390 2. 5958, 541 555, 559 156, 752 71 1. 155, 239 156, 752 71 156, 239 156, 752 71 156, 249 155, 545 1555, 545 1555, 545 1555, 545 1555, 545 155 155, 545 155 155, 545 155 155, 545 155, 555 155, 545 155, 555 155, 545 155, 555, 555 155, 555 155, 555, 555 155, 555 1555 1555, 555 155, 555 155

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DEMOPLOT:25

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	ladie 10: incremental wasn tiow table 16-1 : Incremental Gash Flow Amonstration Plot plus Met Gash Flow	ontal Cash F	loe from De	smonstratic	on Plot ole	s Net Cash	froz	Animal Rushandrv	drv											
	Year			1993 0	1994	2651 2	1996.	1597	1958	1399 6	2000	2001 8	2002	2003 10	2004 11	2005 12	2005	2007 14	2008 15	7
	Inflation Inde	X		1.08	1.17	1.25	1.36	1.47	1. 59	1. 71	1.85	2.00	. 60 2. 15	2.33	2.52	2.72	2.94	3.17	3.43	
	Net Cash Flow (Mith Case) 0 -612,098 884,264 1,182,070 NET from Animal Musbandity(from 10-2) -456,529 234,985 242,935 Net Cash Flow (Mithout Case) 0 -154,286 -34,921 216,464	(Fith Case) Animal Husbu (Without Cas	ndry(from . c)		612,098 456,529 154,286	884, 264 1 224, 985 -34, 321	182.070 1. 242.983 215.464	292, 243 262, 422 233, 781	1, 606, 333 2 283, 415 252, 483	33 2, 353, 028 3 16 306, 089 83 272, 882	3,605,333 2,353,028 3,125,707 4,064,189 4,897,535 283,415 306,039 3,30,578 357,022 335,584 252,483 272,582 294,437 318,056 343,501	064,189 4 357,022 318,056	. 897, 535 385, 584 343, 501	8, 512, 829 5, 559 504 6, 178, 288 5, 667, 042 7, 156, 058 12, 508, 139 8, 315, 815 415, 411, 413, 443 745 6, 457, 725 5, 544, 831 5, 556, 549 6, 11, 873 6, 650, 223 370, 381 400, 650 432, 712 467, 728 504, 715 545, 093 558, 703	5, 559, 504 6 449, 745 400, 650	5, 178, 298 5 485, 725 432, 712	663, 043 7 524, 583 467, 325	7, 196, 085 12, 508, 139 566, 549 611, 873 504, 716 545, 033	508, 139 8, 611, 873 545, 093	. 315. 815 650. 823 588. 703
	Incremental C.	ash člov(No	tinal)		914.341	. 144, 159 1	1, 208, 589 1;	счалжане» 320, 884	5, 537, 265 : 2	. 385, 434	1, 161, 786 4	, 103, 155 A	. 939, 618	8, 558, 275	5, 708, 689	5. 231. 310 6	.720.295 7	. 257, 320 12	574, 919 8	. 387.
	Increachtal C.	ASh Flow (Re-	1])		783, 900	908, 278	888. 349	н.	7, 292, 094 I	. 392, 462	L, 708, 215 2	. 052, 599 2	. 287, 999	3. 570, 499	2, 256, 999		. 287, 999 2	. 287. 999 3	670, 499 2	. 256.
	Incremental N	et Present	alue 13, 53	0,374		, 6 4 6 4 4 8 6 8 6 4 4 4 4 4 4 4 4 4 4 4		5 2 N K F H F 9 5	****	四第四次 四代 建苯基基化			"有助教室所以将来此物信"	1947 - 1957 - 1957 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 - 1947 -		****	8)080000000000000000000000000000000000			
	2019	2011 7 2011	2012 2013 19 20	2013 20	2014 21	1 2015	2016 23	2017	2018 25	2019 26										
	4, 00	4. 32	4.66	5. 03	5. 44	5. 87	6.34	6. 85	7.40	7.99										
Ξ.	9, 077, 946 8, 713, 689	774, 280 9, 770, 784	476, 222 17 832, 447	193,595 1 899,043	0, 938, 898 1 970, 966	1, 958, 339 1 1, 048, 643	12, 892, 296 1 1, 132, 535	0, 923, 579 1, 223, 138	самерыксыраметениялараандараан и какана 923,679 25,263,012 2,812,548 - 223,138 2,288,419 0 2005 2.4 1,288,419	2.812, 548 0		•		• •						
	000,700 Kanakeasee 9 155 234 8	асо, суц знатажана: 853. 404 9	131, 434 148855 076 17.		007, 007 1488888888888	2.070.789 1	1.015.902 1	4, 057, 174 - 2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-172, 150										
	2,291,240 2,052,589 2,045,099 2,001,599 2,055,640 2,052,589 2,00	. 052, 599 2.	052,599 0	.435,099	2, 031, 599	2, 055, 840	2,052,539	2, 052, 599 	3, 701, 099 ***********************************	-21, 551										
	10-2 : [Benefits from Animal Husbandry (per Ha)]	its from An	imal Husban	dry (per H	(e)]			÷												
	Year			1993	1994 1	1995	1996 3	1997	1998 1	1959 6.	2000	2001 8	2002	2003	2004	2005 12	2006 13	2007 24	2008 15	2005 15
	Inflation Index 1.08 1.17 1.25 1.35	lex.		1.03	1, 17	1.26		1.47	1. 59	17.1	1.85	2.00	2.15		2.52	2. 72	2, 34	3.17		3.70
	Receipt Sales of Sheep	tep		÷		718, 035		827, 517	904 518	376, 880			1, 230, 587	1, 329, 034				1, 808, 135		2, 109, 010
	Expenditure Purchase of Sheep Labor Cost Grass	Sheep			310,262 66,485 79,782	335, 083 71, 804 86, 164	361, 890 77, 548 93, 057	390, 841 83, 752 100, 502	422, 109 90, 452 108, 542	455, 877 97, 586 117, 226	492, 347 105, 503 126, 604	531, 705 113, 943 136, 732	574. 274 123. 059 147, 570	520.215 132.903 159,484	669, 833 143, 536 172, 243	723, 420 155, 019 188, 022	781, 294 167, 420 200, 904	843, 7 <i>97</i> 180, 814 216, 976	811. 301 195. 279 234. 334	534, 205 210, 901 253, 081
	ACCOUNTS (1000) - 455,529	l Kusbandary	(Nominal)		***************	хаанилттанан ан алаан ан 242		252.422	283, 415	. 306. 089		357, 022	85, 584		448, 745	485, 725 524, 58	524, 583	566. 549	611, 873	550, 823
	KF fr.Amiel Husbendary(Reel) -391,400 178,500 178. Net Present Value 1.025,025	Husbandary	(Real) [ue 1,02		-331,400	178,800 178,800 	178, 500 1.78, 500	178, 600	178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178, 600 178	178, 600 ± 178, 600		178, 600 1 xveruestates	78, 600		178, 500 178, 500 248, 500	178, 500 :***********	178, 600 	0 178,500	178, 600	178.600 •••******
	2010 17	2011 7 2011 18	2012 19	2013 20	2014 21	2015	2016 23	2017 24	2018	2019										
	4.00 4.32 4.66 5.03 5.44 5.87	4.32	4.66	5.03	5,44	5.87		6.85	7.40											
	2, 277, 731 2	2,455,950 2	2. 556. 746 2	2, 869, 285	3, 098, 828	3, 346, 734	3, 614, 473	3. 903, 531	4, 215, 921											
	1.062.941 227.773 273.328	1, 147. 976 1 245, 995 295, 194	1, 239, 815 265, 675 318, 809	1, 339, 000 285, 929 344, 314	1. 446, 120 309. 883 371, 859	L. 561, 809 334, 673 401, 608	I 1.686.754 1 351.447 1 433.737	1, 821, 694 390, 363 468, 435	421, 592 505, 911											
	713.689 770.784 832.447 839.043 970.556 1.048.543 1.13	776, 784 832, 447	832, 447	253, 043	анцикатавыеванынынынанинини 893,043 870,955 1,048,643	1, 048, 543	2.535	zanitezzez 1, 223, 138	леецавистии 3, 288, 419	0 0										
	224MHELKELWERKERKERKERSARABBECKERKELTENNERFERARABBARGERKERER 178 6AG - 178 6AG - 171	<u>4044920555555</u> 170 809	833465555555 110 CDD		おおり 開業 そりは ににん															

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L_DATA (FINANCIA:1)

4. Incremental Net Cash Flow and Incremental Net Present Value in Total Investment Analysis

Incremental Hel Cash Flow com	Net Present Value	. 1993 D	1994	1995 2	1396 3	1997 4	1998 5	199
arm/forest Land Conservalion	Plan	1111111114	******					
forest Development Forest 1	-2, 767, 761, 526	٥	-18), 304, 792	-472, 679, 214	-772, 783, 853	-850, 019, 741	-444, 073, 839	11, 551, 31
Forest 2	-21, 708, 459	0	-521, 400	-2, 052, 900	-4,038,026	-4, 163, 141	-1, 918, 604	-\$06, 54
Forest 3	-63, 039, 589	. 0	-3, 093, 800	-9, 9D1, 778	-18, 231, 685	-17, 472, 833	-5, 312, 333	2, 398, 63
Introduction of Agroforestry Agroforestry 1	15, 197, 596, 765	0	-231, 536, 025	-576, 184, 399	-828, 484, 174	-888, 966, 201	-548, 657, 798	431, 543, 20
Agroforestry 2	-8, 472, 064	. 0	-7, 715, 633	-17, 968, 679	-29, 092, 473	-38, 612, 533	-40, 685, 054	-28,084,97
Improvement of Dry Farming Dry Farming 1	15, 972, 269, 898	. 0	-1, 546, 667	218, 439, 785	703, 580, 465	1, 323, 439, 950	1, 993, 959, 515	2, 549, 560, 26
Dry Ferming 2	4, 333, 907, 509	0	39, 221, 125	152, 239, 518	314, 540, 242	489, 109, 305	641, 629, 960	698, 304, 93
Conservation of Settlement En						· · · · · · · · ·		
Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)	-437, 467, 088 -35, 212, 339 -34, 583, 547		-65, 120, 000 -5, 241, 600 -5, 148, 000	-130, 240, 000 -10, 483, 200 -10, 296, 000	-162,800,060 -13,104,000 -12,870,000	-162, 800, 000 -13, 104, 000 -12, 870, 000	-130, 240, 000 -10, 483, 200 -10, 296, 000	
errent Conservation Plan Theck Dam	- 946, 055, 469	0	-207, 671, 468	-242, 713, 980	-325, 368, 745	-311, 979, 918	-300, 175, 525	-286, 077, 44
mall Check Dam	-302, 157, 196	8	-62, 570, 730	-80, 264, 101	-87, 541, 528	-84, 568, 396-	- 82, 408, 442	-80, 422, 73
ally Plug	-505, 245, 057		-104, 080, 000	-145, 600, 000	-166, 400, 000	-166, 400, 000	-166, 400, 000	
evetsent Work	-505, 183, 124		-75, 200, 000	-150, 400, 000	-188,000,060	-188, 000, 000	-150, 400, 000	
iverside Line Planting	-137, 504, 935		-22, 200, 000	-39, 960, 000	-51, 060, 000	-51,060,000	-39, 960, 000	
iverside Revegelation	-151, 420, 580		-22, 540, 000	-45, 080, 000	-56, 350, 000	-56, 359, 000	-45,080.000	
tension Plan emonstration Plot	3, 631, 801, 689	. 0	-78, 390, 000	12, 437, 824	101. 272, 731	269, 559, 889	437, 941, 472	458, 352, 72
raining Center	-730, 297, 521		-883, 660, 000					· · · ·
ducation and Training	-1, 829, 359, 457	÷.,	-403, 996, 750	-407, 290, 338	-410, 748, 504	-414, 379, 785	-418, 192, 524	-422, 195, 90
xtension/Guidance	-550, 638, 017		-665, 272, 000		· · · ·	$(1, \dots, k) \in \mathbb{R}$		
· .					· ·			•
ftastructure Plan	· · · ·							
ccess Road New Road Construction	-2, 828, 596, 418 -1, 498, 865, 035		-388, 944, 480	-395, 238, 080	~423, 559, 280	-392, 091, 280	-392, 091, 280	-129, 018, 80
Improvement of Road Gravel-Gravel Gravel-Asphalt	-1, 129, 674, 635 -29, 342, 843		-327, 805, 826 -8, 514, 625	- 327, 805, 826 - 8, 514, 625	-327, 305, 825 -8, 514, 625	-327, 805, 826 -8, 514, 625	-327, 895, 826 -8, 514, 625	. 1
Slope Protection Regreening of Slope Drain Drop Structure	-35, 151, 749 -108, 780, 521 -14, 239, 745		-10, 200, 237 -31, 565, 630 -4, 132, 050	-10,200,237 -31,565,630 -4,132,050	-10, 200, 237 -31, 565, 630 -4, 132, 050	-10, 200, 237 -31, 565, 630 -4, 132, 050	-10, 209, 237 -31, 555, 630 -4, 132, 050	
Roadside Planting	-12, 541, 990		-3, 639, 400	-3, 639, 400	-3, 639, 400	-3, 639, 400	-3, 639, 400	
ursery	-17, 682, 511		-17, 592, 080	-1, 200, 000	-1, 200, 000	-1,200,000	-1, 200, 000	
vironmental Assessment	-745, 281, 014	· .	-775, 800, 501	-28, 210, 300	-28, 210, 300	-30, 588, 300	-28, 210, 300	-28, 210, 30
nagement Plan	-5, 779, 589, 089	· ·						AF 000 10
) Personnel at Project Offic) Consultant			-110, 590, 278	-107, 518, 326	-104, 531, 705	-101, 628, 047	-98,805,046	-95,060,46
a.Foreign Consultant b.Local Consultant	- 3, 139, 710, 936 - 1, 727, 408, 203		1, 062, 185, 941 -494, 000, 000	-931,070,079 -416,080,600	-583, 805, 287 -416, 000, 000	-563, 433, 607 -364, 000, 000	-544, 032, 095 -338, 090, 090	-525, 554, 29 -312, 000, 00
) Office Construction) Office Running Cost	-409, 289, 256 -47, 868, 890		-494, 000, 000 -495, 240, 000 -19, 329, 856	0 -9, 826, 290	0 -9, 808, 438	0 -9, 796, 916	0 -9, 785, 713	-9, 774, 82
************************			6 738 047 764	-4, 232, 912, 301	-3, 960, 452, 428	-3, 037, 231, 320	-1, 148, 725, 526	2, 233, 724, 80

1_DATA (FINANCIA: 1)

Financial Analsysis

	Net Present Value	2000 7	2091 8	2002 9	2003 10	2004 1	2005 12	200 1
Farm/Forest Land Conservation P		*****			***************	*******************	****************	=======================================
Forest Development Forest 1	-2, 767, 761, 526	39, 385, 087	-135, 488, 996	-502, 588, 786	-640, 936, 240	51, 449, 129	39, 386, 087	-135, 188, 99
Forest 2	-21, 708, 459	-1, 397, 104	-2, 823, 607	-6, 815, 252	-4, 538, 881	-169, 044	-1, 397, 104	2. 823. 60
Forest 3	-63, 039, 589	2, 213, 611	-5, 123, 778	-18, 479, 278	-15, 972, 889	4, 343, 074	2, 213, 611	-5, 123, 77
Introduction of Agroforestry ' Agroforestry 1	15, 197, 596, 765	1, 336, 868, 429	2, 223, 184, 785	9, 121, 815, 113	3. 881, 795, 925	4, 583, 881, 872	4, 987, 799, 017	5, 121, 592, 97
Agroforestry 2	-8, 472, 064	-19, 894, 921	-8, 271, 752	5, 102, 753	17, 694, 473	31, 182, 748	39, 440, 279	42, 273, 04
Improvement of Dry Ferming Dry Farming 1	16, 972, 269, 898	2,601,130,300	2, 710, 837, 724	2, 860, 182, 612	3, 018, 283, 895	3, 150, 419, 601	3, 225, 945, 956	3, 225, 945, 95
Dry Farming 2	4, 333, 907, 509	688, 524, 867	688, 524, 867	688, 524, 867	888, 524, 867	688, 524, 867	688, 524, 867	688, 524, 86
Conservation of Settlement Env Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)	-507, 262, 973 -437, 467, 088 -35, 212, 339 -34, 583, 547							
Torrent Conservation Plen Check Dam	-946, 055, 469	-275, 385, 187	61, 732, 019	80, 955, 025	80, 552, 367	68, 267, 388	68, 582, 993	68, 582, 99
Small Check Dam	-302, 157, 196	-78, 527, 455	10, 771, 871	13, 983, 154	13, 915, 725	11, 863, 575	11, 916, 295	11, 916, 29
Gully Plug	-506, 245, 057						,	
Revetuent Work	-505, 183, 124							
Riverside Line Planting	-137, 504, 935							
Riverside Revegetation	-151, 420, 580							·
Extension Plan Demonstration Plot	3, 631, 861, 689	539, 277, 045	515, 327, 546	604, 881, 296	801, 169, 722	822, 543, 722	822, 873, 796	6,84, 623, 391
Training Center	-730, 297, 521							
Education and Training	-1, 829, 359, 457	-426, 399, 445						
Extension/Guidance	-550, 638, 017							
Inftastructure Plan Access Road New Road Construction	-2, 828, 596, 418 -1, 498, 865, 035	-129, 018, 800				• ·		
Improvement of Road Gravel-Gravel Gravel-Asphait	-1, 129, 674, 535 -29, 342, 843	. 9 0						
Slope Protection Regrecoing of Slope Drain Drop Structure	-35, 151, 749 -108, 780, 521 -14, 239, 746	0 0 0						
Roadside Planting	-12, 541, 990	0						
Kursery	-17, 682, 511	0						
Environmental Assessment	-745,281,014	-30, 586, 300						
Hanagement Plan 1) Personnel at Project Office 2) Computer	-5, 779, 589, 089 -455, 311, 805	-93, 392, 115	.0					
2) Consultant a.Foreign Consultant b.Local Consultant 3) Office Construction 4) Office Running Cost	-3, 139, 710, 936 -1, 727, 408, 203 -409, 289, 256 -47, 868, 890	-507, 956, 468 -312, 000, 000 0 -9, 764, 233	0 0 7, 925, 552		·			

3, 322, 977, 312 6, 065, 597, 830 6, 848, 362, 505 7, 840, 408, 964 9, 412, 312, 732 9, 865, 285, 787 9, 699, 024, 145

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I_DATA (FINARCIA:1)

-640, 836, 240 51, 449, 129 39, 386, 087 -136, 488, 996 -502, 588, 786 -640, 936, 2 -4, 538, 881 -169, 044 -1, 397, 104 -2, 823, 007 -6, 015, 252 -4, 538,	14	Net Present Value	
-4, 538, 881 -169, 044 -1, 397, 104 -2, 823, 007 -6, 015, 252 -4, 538,			****************************
-4, 538, 881 -169, 044 -1, 397, 104 -2, 823, 007 -6, 015, 252 -4, 538,		lan .	Fars/forest Land Conservation P
	-502, 588, 786	-2, 767, 761, 526	Forest Development Forest i
	-6, 015, 252	-21, 708, 459	Forest 2
-15, 972, 889 4, 343, 074 2, 213, 611 -5, 123, 778 -18, 479, 278 -15, 972, 8	-18, 479, 278	-63,039,589	Forest 3
4, 897, 194, 750 5, 052, 939, 972 5, 125, 861, 417 5, 052, 561, 772 4, 838, 277, 150 4, 517, 523, 1	5, 045, 370, 750	15, 197, 596, 765	Introduction of Agroforestry Agroforestry 1
37, 143, 233 40, 522, 548 42, 297, 159 40, 734, 728 35, 979, 033 29, 121, 5	40, 374, 233	-8, 472, 064	Agroforestry 2
3, 225, 845, 856 3, 225, 845, 856 3, 225, 945, 956 3, 225, 945, 956 3, 225, 945, 956 3, 225, 945, 9	3, 225, 945, 956	16, 972, 269, 898	Improvement of Dry Farming Dry Farming 1
688, 524, 867	588, 524, 857	4, 333, 907, 509	Dry Farming 2
	4	-507, 262, 973 -437, 467, 088 -15, 212, 339 -34, 583, 547	Conservation of Settlement Env Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)
58, 582, 993 68, 582, 993 58, 582, 993 68, 587, 993 68, 582, 993 88, 582, 9	68, 582, 993	-946,055,469	orrent Conservation Plan Check Dam
11, 916, 295 11, 916, 295 11, 916, 295 11, 916, 295 11, 916, 295 11, 916, 295	11, 916, 295	-302, 157, 196	Swall Check Daw
		-506, 245, 057	Guily Plug
		-505, 183, 124	Revetment Work
		-137, 504, 935	Riverside Line Planting
		~151, 420, 580	Riverside Revegetation
824, 649, 722 822, 549, 722 822, 873, 795 661, 083, 796 639, 643, 796 754, 029, 7	\$86, 723, 796	3, 631, 801, 689	xtension Plan Demonstration Plot
		-730, 297, 521	Training Center
		-1, 829, 359, 457	Education and Training
		-550, 638, 017	Extension/Guidance
		-2, 828, 596, 418 -1, 498, 865, 035	nftastructure Plan Access Road New Road Construction
		-1, 129, 674, 535 -29, 342, 643	Improvement of Road Gravel-Gravel Gravel-Asphalt
		-35, 151, 749 -108, 780, 521 -14, 239, 746	Slope Protection Regreening of Slope Drain Drop Structure
		-12, 541, 990	Roadside Planting
		-17, 582, 511	Nursery
		-745, 281, 014	nvironmental Assessment
	•	-5, 779, 589, 089 -455, 311, 805 -3, 139, 710, 936	lanagement Plan 1) Personnel at Project Office 2) Consultant
		-1, 727, 408, 203 -409, 289, 256 -47, 868, 890	a.Foreign Consultant b.Local Consultant 3) Office Construction 4) Office Running Cost

1_DATA (FINANCIA: I)

Financial Analsysis	V-L D-Amont	2014	2015	2016	2017	2018	2019
	Net Present Value	21	22	23	24	25	26
Farm/Forest Land Conservation P							
forest Development Forest 1	-2, 767, 761, 525	51, 449, 129	69, 194, 087	-66,017,998	-400, 904, 045	-541, 184, 795	145, 223, 804
Forest 2	-21, 708, 459	-169.044	-1, 352, 604	-2,729,170	- 5, 886, 163	-4, 407. 548	86, 204
Forest 3	-63, 039, 589	4, 343, 074	2, 551, 511	-4, 133, 407	-17, 123, 352	-14, 667, 000	-19. 444
Introduction of Agroforestry Agroforestry 1	15, 197, 596, 765	4, 510, 690, 372	4, 440, 488, 617	4, 442, 865, 750	4, 371, 675, 194	4, 220, 657, 467	414, 029, 583
Agroforestry 2	-8, 472, 064	28, 875, 268	27, 839, 799	27, 870, 836	26,005.496	22, 762, 107	21, 405. 741
Improvement of Dry Farming Dry Farming 1	16, 972, 269, 898	3, 225, 945, 956	3, 225, 945, 956	3, 225, 945, 956	3, 225, 945, 956	3, 215, 065, 956	-334,071,111
Dry Faraing 2	4, 333, 907, 509	688, 524, 867	688, 524, 857	688, 524, 867	688, 524, 867	688, 524, 867	-97, 743, 333
Conservation of Settlement Env Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)	-507, 262, 973 -437, 467, 088 -35, 212, 339 -14, 583, 547	-					
Torrent Conservation Plan Check Dzm	-946, 055, 469	68, 582, 993	68, 582, 993	68, 582, 993	68, 582, 993	58, 582, 993	3, 012, 593
Small Check Dam	-302, 157, 196	11, 916, 295	11, 916, 295	11, 916, 295	11, 916, 295	11, 916, 295	523, 438
Gully Plug	-506, 245, 057						
Revetment Work	-505, 183, 124				•		
Riverside Line Planting	-137, 504, 935						
Riverside Revegetation	-151, 420, 580		•				
Extension Plan Demonstration Plot	3, 631, 801, 689	751, 929, 722	752, 673, 795	614, 778, 981	615, 974, 167	780, 629, 722	-6, 465, 278
Training Center	-730, 297, 521	•					
Education and Training	-1, 829, 359, 457						
Extension/Guidance	-550, 638, 017						
Inflastructure Plan Access Road New Road Construction	-2, 828, 596, 418 -1, 498, 865, 035						
lsprovesent of Road Gravel-Gravel Gravel-Asphalt	-1, 129, 674, 535 -29, 342, 843						
Slope Protection Regreening of Slope Drain Drop Structure	-35, 151, 749 -108, 780, 521 -14, 239, 746						
Roadside Planting	-12, 541, 990						
Nursery	-17, 682, 511						
Environmental Assessment	-745, 281, 014						
Nanagement Plan 1) Personnel at Project Office 2) Consultant							
a.Foreign Consultant b.Local Consultant 3) Office Construction 4) Office Running Cost	-3, 139, 710, 936 -1, 727, 408, 203 -409, 289, 256 -47, 858, 890						

9, 342, 088, 631 9, 286, 475, 417 9, 007, 606, 104 8, 584, 711, 407 8, 447, 880, 062 145, 982, 196

- 131 -.

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D3 Data for Economic Analysis

- 1. Price Adjustment from Financial to Economic Prices
 - (1) Price Adjustment
 - (2) Economic Opportunity Cost
 - (3) Economic Costs and Foreign Exchange Premium
- 2. Incremental Net Cash Flow and Incremental Net Present Value in Economic Analysis

1. Price Adjustment from Financial to Economic Prices

(1) Price Adjustment

Economic prices derived from market prices are used for the analysis. Taxes and subsidies are treated as items to be transferred among concerned parties. Materials used in the project are classified into either tradable goods or non-tradable goods and the adjustment for foreign exchange premium is made on tradable goods.

i) Basic Conditions

Basic conditions for the analysis such as implementation period and project life, base year prices, inflation rate, productivity increase, in-use value of land, working capital schedule are the same as in the financial analysis. Prices used for calculation of current benefits and costs from farming practice, and investment costs are adjusted to economic prices from financial (market) prices but quantities used are the same in the both analyses. The following shows an example of adjustment from financial to economic prices. The example is a case of a vehicle(complete knock down).

Item	. (A)	(B)	(C)	(D)	(E)	(F)
CIF(Imported)	2,788	1.0	2,788	100%	1.15	3,206
Local Content	4,182	0.8	3,346	80%	1.15	3,848
Inland Transport	18	0.7	293	50%	1.15	324
Assembler's Margin	1,108	0.7	776	0%	1.15	776
Trade Margin	369	0.7	259	0%	1.15	259
Luxury Tax	2,217	0	0	0%	1.15	0
VAT	887	0	0	0%	1.15	0
Registration Fee	887	0	0	0%	1.15	89
Automobile tax	444	0	0	0%	1.15	0
Financial Price	13,300	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Economic P	rice 8,502

Example of Price Adjustment in the case of a Vehicle

(A) Financial Value

(B) Conversion Factor 1 (CF 1)

(C) Economic Value 1

(D) Tradable Component

(E) Foreign Exchange Premium

(F) Economic Value 2

 $(F)=(A) \times (B) + (A) \times (D) \times (E-1)$

Conversion Factor 2 (CF 2) = 8,502/13,300 = 0.64

Conversion Factor 1 (CF 1) is used to adjust excess profits, subsidies and taxes. After adjustment with CF 1, economic value 1 is obtained. Adjustment of tradable goods are done by considering exchange rate premium. By adding foreign exchange premium on tradable components, economic value 2 is obtained. Conversion Factor 2 (CF 2) is derived from calculating ratios of economic prices to financial ones. The calculation of conversion factors are shown in Table 6-2 of the Main Report.

ii) Exchange Rate Premium

The foreign exchange rate is 2,050 Rp in the end of 1992. Economic cost of foreign exchange is calculated, assuming that the project creates additional foreign exchange demand and therefore tends to depreciate rupiah against foreign currencies. The estimation of the economic cost of foreign exchange is made by combining the resource cost of the additional supply of exports with the reduction in consumer benefits from the cut back in import consumption. Through adjusting distortion caused by export taxes and import duties, the foreign exchange premium is calculated at 0.15. The following formula is used for the calculation of the foreign exchange premium.

Foreign Exchange Premium =

 $\frac{\text{Ei}*(1-\text{Tx}) - \text{Ni}*(1+\text{T})*(\text{Qi}/\text{Qx})}{\text{Ei} - \text{Ni}*(\text{Qi}/\text{Qx})} - 1$

Ei : Elasticity of supply of export(it is assumed to be 0.5)

Ni : Elasticity of demand of import(it is assumed to be -1.5)

- Tx : Rate of export taxes
- T : Rate of import duties
- Qi : Import quantity (in this case, import values are used.)
- Qx : Export quantity (in this case, export values are used.)

iii) Economic Opportunity Cost of Labor(EOCL)

a) Unskilled Labor Cost

Based on interviews with farmers, it is learned that daily wages in the project area for farming works vary from 2,500 Rp per day to 4,000 for male and 1,000 Rp to

- 134 -

2,000 Rp for female.Wages differ, depending on whether lunch is served or not. In some cases, harvested crops are distributed to workers in addition to the payment of wages. It is heard that wage rates also fluctuate by season. For example, during the wet season from September to January, the wage at Pinggirsari near the project area ranges from 2,500 Rp to 3,000 Rp while 2,000 Rp to 2,500 Rp during the dry season from February to August. In general, wage rates during wet seasons seem to be higher than rates during dry seasons.

During dry seasons, some farmers tend to leave farming works and go to Bandung for temporally jobs, such as construction labor works. During survey in Bandung, it is learned that such construction labors earn 6,000 Rp to 10,000 Rp per day. However, they do not always find their jobs every time they wish. (According to interviews with farmers who do digging works in Bandung, they work once three days on average.) Through interview with workers from textile companies in Bandung, their daily wages vary from 2,900 Rp (excluding lunch) to 3,400 Rp.

From these interviews in and outside the project area, the opportunity cost of unskilled labor is estimated at around 3,000 Rp per day. This is the same rate as the one used in the financial analysis. This amount is used for the economic opportunity cost of unskilled labor in the economic analysis.

b) Skilled Labor Cost

Skilled labor are classified into two groups. One includes those who have high skills, such as consultants and surveyors. The other group consists of semi-skilled labors. For skilled labors, the same remunerations or wage rates with financial analysis are used because of their limited availability. In terms of remunerations of foreign consultants, the amounts are adjusted by foreign exchange premium.

For semi-skilled workers, wage rates are adjusted in the following way. According to survey on wage rates at construction site in Bandung, daily wage rates of semi-skilled labors amount to 7,500 Rp per day during the dry season in 1993. If the project employs semi-skilled workers from Bandung, the project needs to pay compensating difference for transportation from Bandung to the project area on top of the above rate. But it is assumed to be relatively easier to employ semi-skilled labors in long term projects in this type. Therefore, the above rate of 7,500 Rp (prices in 1993) is referred when the economic opportunity cost of semi-skilled labors is considered. As financial wage rates used for semi-skilled labor ranges from 4,000 Rp to 5,000 Rp per day in 1992 price, wages for semiskilled workers are adjusted by 1.4 as an average multiplier.

In terms of salaries for staff at the project office, the same rates as financial prices are used for the economican analysis.

iv) Economic opportunity cost of capital

The economic opportunity cost of capital(EOCK) is basically obtained by taking weighted average of the rate of time preference for consumption and weighted average of the rate of return on private investment : economic cost of postponing consumption and net return foregone by the private owners of the investment. By adjusting tax factors, the economic opportunity cost of capital is calculated at 13%.

The following formula is used for the calculation.

$$Ie = \frac{\sum_{i=1}^{n} E_{i}^{i} (Si/St) ri - \sum_{j=1}^{n} N_{j}^{i} (Ij/St) \pi j}{\sum_{i=1}^{n} E_{i}^{i} (Si/St) - \sum_{j=1}^{n} N_{j}^{i} (Ij/St)}$$

 E° = Elasticity of supply of private sector savings

 N_{j}^{1} = Elasticity of demand for private sector investment

Si = Amount of savings by sector

St = Total amount of savings

Ij = Investment demand by private sector

ri = Real deposit interest rate by sector

 $\pi \mathbf{j} = \mathbf{Expected}$ rate of return on investment by sector

(real)

It is difficult to obtain data on expected rate of return on investment by private sector, demand and supply elasticity of funds by sector. Therefore, these figures are estimated or refereed to the cases in other countries.

ECOFX:19

Price Adjustment from Financial to Economic Prices EcoPALCE: 22 (3) Economic Costs and Foreign Exchange Premium

Calculation of Economic Costs

Foreign Exchange Premium = Foreign Exchange Rate = Foreign Exchange Rate = Calculation of Economic Opportunity Cost of Foreign Exchange

1988/89 1983/90 1990/91 1991/92

Year

9, 241 23, 028 42, 436

7,075

1.15 2050 Rp/US\$ 125 Rp/US\$

Urea	Financial Value	Conversion Factor 1	Conversion Econo.Value % of Factor 1 Unadjusted Tradable	% of Tradable	Foreign Exchg Pre,	Economic Value
даталаталаскананы F08 brice	наналараарыны 329, 895		100.0% 100.0%	100, 0%		379.379
Fconomic Subsidy.	-147.013	0	0		1.15	
Distribution Cost	-43, 159	0.1	-30, 211	50.0		
Distribution Cost	86, 317	. 0	50, 422	50.0%		66.896
Subsidy to firm	18,406	0	0		1.15	9
Subsidy to farmer	-34, 447	0	0		1.15	
Fara Gate Price	210,000	"		u Li Li Li Li Li Li Li Li Li Li Li Li Li	u H H H H H H H H H H H H H H H H H H H	412, 327
Conversion Factor 2	1.966	-				

21. 8**2** 0. 1**3**

23, 830 42, 181 23, 0%

laport Duty laport (cif) (\$) (Rp) Export Tax Export (fob) (\$) Tariff Rate(T) Export Tax(tx)

Exchange Rate(Rp=\$) 1585.7 1770.1 1842.8

-1-0-5 1, 15

Elasticity of supply of export(En) Elasticity of demand of import(Ni)

1.15 1.152

1.14

ECOFX*

Average Conversion Factor

(note)+ it is assumed that economic subsidies are given to farmers in a form of export quota to fertilizer companies.

Economic Value	-26.038 52.175 52.175	
Toreign Exchg Pre,	- - - - - - - - - - - - - - - - - - -	
X of Tradable	447,024 100.04 1.15 447,024 100.04 1.15 -23 563 50.04 1.15 47,126 50.04 1.15 1.15 0 1.15	
Conversion Econo.Value X of Foreign Factor 1 Unadjusted Tradable Exchg Pre,	417,024 477,024 47,126	
Conversion Factor 1	447, 024 447, 024 38, 654 57, 326 67, 326 0, 7 67, 326 0, 7 200, 183 0, 7 0, 7 200, 183	
fibanciai Value	441,024 441,024 33,954 57,325 67,325 44 40,544	260, 000 2. 078
TSP Value Value	F06 price 447,024 1 447,024 100.0% 1.15 514,078 6000 6000 500 1.15 514,078 6000 500 5000 500 500 1.15 514,078 500 500 500 500 500 500 500 500 500 50	farm Gate Price Conversion Factor 2 =

(note) + it is assumed that economic subsidies are given to farmers in a form of export quota to fertilizer companies.

-------22, 373 ************ 285, 716 253, 343 Econogic. Value -----****** Pre. ZA Zammer State Conversion Econo. Value X of Foreign Value Ecotor 1 Unadjusted Tradable Exchg Pre 201 Price 228,994 1 228,994 1 1 Fol Price 100.0X 1. 50, 02 50, 03
 F0D Frice
 228, 994
 1
 228, 994

 Economic Subsidy
 68, 116
 0
 0

 Distribution Cost
 -28, 866
 0, 7
 -20, 208

 Distribution Cost
 -77, 735
 0, 7
 -20, 208

 Subsidy to firm
 33, 014
 0
 0
 0

 Subsidy to firm
 -148, 934
 0
 0
 0

 Starm Gate
 -148, 004
 0
 0
 0
 1.351 Factor 2 = Conversion

(note). It is assumed that economic subsidies are given to farmers in a form of export quota to fertilizer companies.

ECOPRICE: 22

(Item) (CF 2) Heathertopherancements Office Equipment 0.31 Construct Materials 0.94 anasonemerseseements List of Conversion Factor 2 used for Economic Analysis Lime Pesticide (Liquíd) Pesticide (Granule) Computer ZA KCL Com'd(Urea,TSP.KCL) torcycle Maize Soybeans Cement elephone uel Oil 'chicle addy sphat Urea ŝ

2.	Incremental No	et Cash Flow and	Incremental Net	Present Valu	e in Economic Analysi	is –

conomic Analsysis Incremental Net Cash Flow combi	ned with each pro	ject com	ponent	1005	1996	1997	1998	1999
	Net Present Value	1993	1994	1995 2	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	4	5	
orm/forest Land Conservation Pl		********	*************					
orest Development	-2, 276, 991, 667	Ð	-193, 526, 568	-528, 855, 891	-905, 501, 206	-952, 429, 353	-389,705,117	149, 898, 673
Forest 1 Forest 2	-23, 666, 608	. 0	-806, 150	-3, 225, 710	-6, 396, 984	-6, 580, 430	-2, 989, 613	-615, 300
Forest 3	- 79, 521, 492	0	-4, 508, 250	-15, 023, 194	-28, 102, 977	-26, 743, 935	-9, 609, 240	1, 868, 367
Introduction of Agroforestry								ACT 050 015
Agroforestry I	6, 050, 181, 156	0	-275, 998, 895		-1, 183, 731, 504		-1, 272, 513, 478	-355, 860, 916
Agroforestry 2	~146, 602, 961	0	-9, 713, 767	-24, 915, 813	-42, 289, 017	-58,026,188	-64, 936, 817	-52, 824, 856
mprovement of Dry Farming Dry Farming 1	15, 394, 700, 969	0	45, 878, 613	399, 191, 782	1, 060, 054, 331	1, 857, 382, 559	2, 670, 284, 785	3, 233, 310, 029
Dry Farming 2	4, 496, 691, 183	C	59, 645, 435	226, 264, 752	457, 802, 914	700, 600, 517	907, 496, 485	\$71, 261, 927
Conservation of Settlement Env Absorbing Well	-455, 996, 842 -393, 450, 611	· ·	-65, 356, 368	-130, 712, 736	-163, 390, 920	-163, 390, 920	-130, 712, 736	
Trees (Jack Fruit) Trees (Gliricidia)	-31, 554, 855 -30, 991, 376		-5,241,600 -5,148,000	-10, 483, 200 -10, 296, 000	-13, 104, 000 -12, 870, 000	-13, 104, 000 -12, 870, 000	-10, 483, 200 -10, 296, 000	
rrent Conservation Plan				0C1 485 060	- 337, 446, 865	-323, 871, \$11	- 311, 426, 598	-295, 430, 612
heck Dam	-310, 666, 031	0	-215, 357, 545	-251, 498, 068 -82, 097, 966	-89, 568, 431	-86, 560, 400	-84, 275, 766	-82, 117, 911
wall Check Dam	-280, 141, 628	0		-150, 757, 600	-172, 294, 400	-172, 294, 400	-172, 294, 400	
ully Plug	-470, 757, 019 -449, 765, 625		-107, 684, 000 -74, 710, 896	-149, 421, 792	-185, 777, 240	-186, 777, 240	-149, 421, 792	
evetment Work	-125, 213, 688		-22, 544, 000	-40, 579, 200	-51, 851, 200	-51, 851, 200	-40, 579, 200	
iverside Line Planting iverside Revegetation	-135, 531, 450		-22, 513, 228	-45, 026, 456	-56, 283, 070	-56, 283, 070	-45, 026, 456	
tension Plan	. 133, 331, 440		20,000,000					
emonstration Plot	3, 194, 651, 590	0	-65, 361, 638	50, 410, 228	162, 396, 152	342, 329, 901	481, 966, 336	539, 997, 273
raining Center	-640, 158, 536		-817, 418, 435			:		100 107 000
ducation and Training	-1, 616, 208, 741		-403, 996, 750	-407, 290, 338	-410, 748, 604	-414, 379, 785	-418, 192, 524	-422, 195, 900
xtension/Guidance	-399, 926, 683		-510, 866, 381					
ftastructure Plan ccess Road New Road Construction	-2, 332, 410, 239 -1, 220, 084, 539		-353, 397, 120	- 359, 115, 520	- 384, 848, 320	-358, 256, 320	-356, 256, 320	-117, 227, 200 ⁻
improvement of Road				·	· .			
Gravel-Gravel Gravel-Asphalt	-929, 964, 300 -25, 012, 697		-298, 774, 684 -8, 035, 965	-298, 774, 684 -8, 035, 965	-298, 774, 684 -8, 035, 965	-298, 774, 684 -8, 035, 965	-298, 774, 684 -8, 035, 965	0 0
Slope Protection	43 300 380		-10, 836, 223	-10, 836, 223	-10, 836, 223	-10, 836, 223	-10, 836, 223	0
Regreening of Slope Drain	-33, 728, 763 -98, 212, 925 -14, 079, 041		-31, 553, 400 -4, 523, 250	-31, 553, 400 -4, 523, 250	-31, 553, 400 -4, 523, 250	-31, 553, 400 -4, 523, 250	- 31, 553, 400 - 4, 523, 250	0
Drop Structure	-11, 327, 975		-3, 639, 400	-3, 639, 400	-3, 639, 400	-3, 639, 400	-3, 639, 400	. 0
Roadside Planting	-16, 482, 235		-17, 476, 800	-1, 200, 000	-1, 200, 000	-1, 200, 000	-1, 200, 000	0
ursery	-479, 442, 256		-503, 815, 911	-26, 477, 943	-25, 477, 943	-28, 640, 103	-26, 477, 943	-25, 477, 943
vironmental Assessment	-5, 536, 808, 938							4 M (1997)
) Personnel at Project Office) Consultant			-119,016,204	-124, 526, 213	-130, 291, 316	-136, 323, 321	-142, 634, 585	-149, 238, 039
a.Foreign Consultant b.Local Consultant	-3, 141, 779, 138 -1, 540, 216, 996		~494,000,000	-1, 038, 501, 242 -416, 000, 000	-416,000,000	-628, 445, 177 -364, 600, 000	-606, 804, 930 -338, 000, 000	-586, 195, 171 -312, 000, 000
) Office Construction) Office Running Cost	-286, 338, 476 -44, 381, 767		-365,625,600 -19,869,777	0 -10, 436, 781	0 - 10, 492, 051	0 - 10, 549, 880	0 -10, 610, 386	0 -10, 673, 693
	•							

Economic Analsysis

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	Net Present Value	2000 7	2001 8	2002 9	2003 10	2004 11	2005 12	200 1
erm/Forest Land Conservation P		-		**************				**************
Forest Development Forest 1	-2, 276, 991, 667	185, 285, 069	-12, 437, 437	- 624, 214, 431	-717, 242, 737	175, 893, 800	185, 285, 069	-72, 437, 43
Forest 2	-23, 665, 608	-1, 351, 199	-3, 489, 455	-8, 602, 005	-6, 382, 351	93, 612	-1, 351, 199	- 3, 489, 45
Forest 3	-79, 521, 452	2, 609, 082	-8, 278, 328	-28, 580, 437	-23, 296, 458	4, 891, 978	2, 609, 082	-8, 278, 32
Introduction of Agroforestry Agroforestry 1	6, 050, 181, 156	560, 512, 765	1, 446, 271, 697	2, 344, 170, 406	3, 103, 393, 470	3, 804, 869, 535	4, 208, 438, 489	4, 342, 232, 44
Agroforestry 2	-146, 602, 961	-43, 243, 458	-31, 820, 289	-18, 245, 784	-5, 654, 064	7, 834, 211	16, 091, 742	18, 924, 51
Improvement of Dry Farming Dry Farming 1	15, 394, 700, 969	3, 235, 080, 530	3, 344, 787, 954	3, 494, 132, 842	3, 652, 214, 125	3, 784, 369, 831	3, 859, 896, 186	J, 859, 896, 18
Dry Farming 2	4, 496, 691, 183	945, 874, 744	945, 874, 744	946, 874, 744	946, 874, 744	945, 874, 744	946, 874, 744	946, 874, 74
Conservation of Settlement Env Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)	-455, 995, 842 -393, 450, 611 -31, 554, 855 -30, 991, 376							
orrent Conservation Plan Check Daa	-910, 686, 031	-284, 642, 242	65, 700, 014	86,069,952	86, 812, 223	75, 380, 688	75, 875, 275	75, 875, 27
Small Check Dam	-280, 141, 628	-80, 134, 054	11, 483, 598	14, 885, 303	15, 010, 296	13, 100, 711	13, 183, 329	13, 183, 32
Sully Plug	-470, 757, 019							
Reveiment Work	-449, 765, 625							
Riverside Line Planting	-125, 213, 688							
Riverside Revegetation	-135, 531, 450					Υ		
xtension Plan Demonstration Plot	3, 194, 651, 590	634, 637, 035	638, 118, 410	750, 531, 222	\$61, 999, 023	983, 439, 023	983, 763, 097	845, 513, 09
Fraining Center	-640, 158, 536							
Education and Training	-1, 616, 208, 741	-426, 399, 445						
Extension/Guidance	-399, 926, 683		•					
nftastructure Plan Access Road Rew Road Construction	-2, 332, 410, 239 -1, 220, 084, 539	-117, 227, 200						
Improvement of Road Gravel-Gravel Gravel-Asphalt	-929, 964, 300 -25, 012, 697	0 0						
Slope Protection Regreening of Slope Drain Drop Structure	-33, 728, 763 -98, 212, 925 -14, 079, 041	0 0 0						
Roadside Planting	-11, 927, 975	0						
Hursery	-16, 482, 235	Û						
nvironmental Assessment	-479, 442, 256	-28, 640, 103						
ianagement Plan 1) Personnel at Project Office	-5, 536, 808, 938 -524, 092, 561	-156, 147, 207	Ð					
2) Consultant a Foreign Consultant b Local Consultant	-3, 141, 779, 138 -1, 540, 216, 995	-566, 566, 830 -312, 000, 000 0	0 0					
 Office Construction Office Running Cost 	-286, 338, 476 -44, 381, 767	-10, 739, 932	12, 757, 210					

		Not Present Value	2007	2008 15	2009 16	2010 17	2011	2012	
				***************************************		****************		************	
Farm/Forest Land	Conservation P	181							
Forest Developm Forest 1	ent	-2, 276, 991, 667	-624, 214, 431	-717, 242, 737	175, 893, 800	185, 285, 069	-72, 437, 437	624, 214, 431	-717,2
Forest 2	-	-23, 666, 608	-8, 602, 005	-6, 382, 351	93, 612	-1, 351, 199	-3, 489, 455	-8, 602, 005	-6,3
Forest 3		-79, 521, 492	-28, 580, 437	-23, 296, 458	4, 891, 978	2, 609, 082	-8, 278, 328	-28, 580, 437	-23, 2
Introduction of Agroforestry 1	Agraforestry	6, 059, 181, 156	4, 266, 010, 222	4, 117, 834, 222	4, 283, 578, 445	4, 346, 500, 889	4, 273, 201, 245	4. 058, 916, 622	3, 738, 1
Agroforestry 2		-146, 602, 961	17, 025, 696	13, 794, 696	17, 174, 011	18, 948, 522	17, 386, 191	12, 630, 496	5,7
Improvement of Dry Farming 1	Dry Farming	15, 394, 700, 959	3, 859, 896, 186	3, 859, 896, 186	3, 859, 896, 185	3, 859, 896, 186	3, 859, 898, 186	3, 859, 895, 186	3, 859, 8
Dry Farming 2		4, 496, 691, 183	946, 874, 744	946, 874, 744	946, 874, 744	946, 874, 744	946, 874, 744	946, 874, 744	946, 8
Conservation of Absorbing Weil Trees (Jack Fr Trees (Gliricio	itt)	-455, 996, 842 -393, 450, 611 -31, 554, 855 -30, 991, 376							
Torrant Conserva Check Dam	tion Plan	-910, 668, 031	75, 875, 275	75, 875, 275	75, 875, 275	75, 875, 275	75, 875, 275	75, 875, 275	75, 8
Small Check Dam		-280, 141, 628	13, 183, 329	13, 183, 329	13, 183, 329	13, 183, 329	13, 183, 329	13, 183, 329	13, 1
Gully Plug		-470, 757, 019							
Revetuent Work		-449, 765, 625	•						
Riverside Line	Planting	-125, 213, 688							
Riverside Reveg	tation	-135, 531, 450							
Extension Plan Demonstration P	lot	3, 194, 651, 590	847, 613, 097	9 85, 539, 023	983, 439, 023	983, 763, 097	821, 973, 097	800, 533, 097	914, 9
Training Center	•	-640, 158, 536							
Education and T	raining	-1, 618, 208, 741							
Extension/Guida	\$31	-389, 926, 683							
Inftastructure P Access Road New Road Const		-2, 332, 410, 239 -1, 220, 084, 539							
Improvement of Gravel-Grave Gravel-Aspha	1	-\$29, \$64, 300 -25, 012, 897							
Slope Protection Regreening of Drain Drop Structu	fSlope	-33, 728, 763 -98, 212, 925 -14, 079, 041							
Roadside Plant		-11, 327, 975							
Kursery		-16, 482, 235							
Environmental As	sessment	-479, 442, 256							
Nanagement Plan		-5, 536, 808, 938							
 Personnel at Consultant Foreign Cons 			•						
b. Local Consul 3) Office Const 4) Office Runnin	tant ruction	-1, \$40, 216, 996 -286, 338, 478 -44, 381, 767							
.,									

	Net Present Value	2014 21	2015 22	2016 23	2017 24	2018 25	201
Farm/Forest Land Conservation P					*************	******************	
Forest Development							
forest 1	-2, 276, 991, 687	175, 893, 800	215, 093, 069	-1, 966, 437	-\$22, 529, 690	-817, 500, 862	-68, 199, 3
Forest 2	-23, 666, 608	93, 612	-1, 306, 699	-3, 395, 618	-8, 472, 918	-6,251,018	1, 442, 8
Forest 3	-79, 521, 492	4, 891, 978	3,057.082	-7, 287, \$57	-27, 224, 511	-21, 990, 569	5, 735, 5
Introduction of Agroforestry Agroforestry 1	6, 050, 181, 156	3, 731, 329, 845	3. 661. 128, 089	3, 663, 506, 222	3, 592, 314, 667	3, 441, 290, 133	530,077,9
Agroforestry 2	-146, 602, 961	5, 526, 731	4, 491, 262	4, 522, 299	2,656,958	-586, 431	35, 803, 7
Improvement of Dry Farming Dry Farming 1	15, 394, 700, 959	3, 859, 896, 186	3, 859, 896, 186	3, 859, 896, 186	3, 859, 896, 186	3, 848, 992, 480	-809, 924, 2
Dry Farming 2	4, 496, 691, 183	946, 874, 744	946, 874, 744	946, 874, 744	946, 874, 744	946, 874, 744	-243, 728, 8
Conservation of Settlement Env Absorbing Well Trees (Jack Fruit) Trees (Gliricidia)	-455, 996, 842 -393, 450, 611 -31, 554, 855 -30, 991, 376	•	·				
forrent Conservation Plan Check Dam	-910, 666, 031	75, 875, 275	75, 875, 275	15, 875, 275	15, 875, 275	75, 875, 275	3, 304, 7
Small Check Dam	-280, 141, 528	13, 183, 323	13, 183, 329	13, 183, 329	13, 183, 329	13, 183, 329	619, 6
Gully Plug	-470, 757, 019						
Revetment Work	-449, 765, 625						
Riverside Line Planting	-125, 213, 688						
Riverside Revegetation	-135, 531, 450						
Extension Plan Demonstration Plot	3, 194, 851, 590	912, 819, 023	\$13, 563, 097	775, 668, 283	776, 883, 468	941, 519, 023	-17, 463, 5
Training Center	-640, 158, 536						
Education and Training	-1, 616, 208, 741						
Extension/Guidance	-399, 926, 683						
Inflastructure Plan Access Road New Road Construction	-2, 332, 410, 239 -1, 220, 084, 539						
Inprovement of Road Gravel-Gravel Gravel-Asphait	-929, 964, 300 -25, 012, 697						
Slope Protection Regreening of Slope Drain Drop Structure	-33, 728, 763 -98, 212, 925 -14, 079, 041						
Roadside Planting	-11, 327, 975						
Nursery	-16, 482, 235						
Environmental Assessment	-479, 442, 256.						
Management Plan 1) Personnel at Project Office 2) Consultant	~5, 536, 808, 938 -524, 092, 561						
a. Foreign Consultant b. Local Consultant 3) Office Construction 4) Office Running Cost	-3, 141, 779, 138 -1, 540, 216, 996 -286, 338, 476 -44, 381, 767		•				

E1 Hydrologic Survey

(1) Drainage System

As Fig.3-1 indicates, the drainage system in the Study Area extends north, east and southeast in radial pattern from the bottom of the Bandung Basin.

The drainage system in the mountain area (in the Planning Area) is distinct on maps. In the paddy field area (outside the Planning Area), the drainage system of the Cisaranten River, the Citarik River, the Cikeruh River and the Cipalemahan River is clear. The drainage system of other rivers is not, however, always distinct because natural rivers and water channels for irrigation cross one another. The Cisaranten River joins the Cipamokolan River in the paddy field area, and then flows into a man-made water channel.

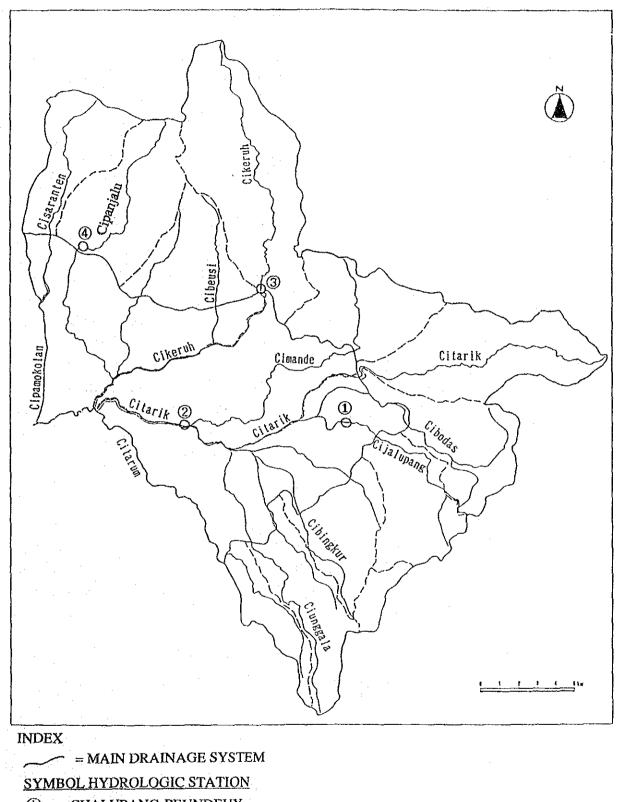
The Cisaranten River of the 1st Sub-Watershed and the Cipalemahan River of the 11th Sub-Watershed flow directly into the Citarum River, without joining the Cikeruh River and the Citarik river.

(2) Observation of Hydrologic Regime

The hydrologic regime of the rivers in the watershed of the Citarik has been observed since around 1986 by the Research Institute for Water Resources Development (DPMA: Pusat Penelitian Dan Pengembangan Pengairan) indicated in Fig. E1-1.

(3) Hydrologic Regime Characteristics of the Rivers

Table E1-1 shows the data obtained by the stations in 1987 on the hydrologic regime of the rivers. These data have less missing data than those of other years.



- ① CIJALUPANG-PEUNDEUY
- ② CITARIK-RANCAKEMIT
- ③ CIKERUH-CIKUDA
- () CIPANJALU-KEPUH

Fig. E1-1 Drainage Sytstem and Hydrologic Stations

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Hydrologic Station No.	Name of Hydrologic Station	Name of River	Catchment Area (km²)	Specific Discharge (L/sec./km³)	Qmax. (m³/sec.)	Qmin. (m³/sec.)	Qmean (m³/sec.)	Coefficient of River Regime	Annual Runoff (x10 ⁶ m ³)
1	CIJALUPANG-PEUNDEUY	CIJALUPANG	20.7	28.3	11.50	0.13	0.59	88	18, 4
•		CITARIK	447.1	12.8	35.00	0.72	5.74	49	181.0
—		CIKERUH	54.2	14.9	19.70	0.05	0.80	394	25.4
_		CIPANJALU	15.3	28.6	4.22	0. 03	0.44	141	13.8

 Table E1-1
 Hydrologic Regime of the Observed Rivers

Source: Modified from the data (1987) of DPMA

The specific discharge values of the Stations No. 1 and No. 4 are twice as high as those of the Stations No. 2 and No. 3. These high values show certainly the local conditions of these Stations of which the catchment area is small. The specific discharge depends on the situation of ground cover, but its high value generally indicates that the amount of rainfall is large in the mountain area.

With respect to discharge quantity, that of the Station No. 2 is the largest and its coefficient of river regime (ratio of the annual maximum discharge to the annual minimum discharge) is the lowest. This is probably because the Station No.2 recorded the values of the sub-watershed of which the catchment area is large and the discharge fluctuation of each small watershed in the upstream is leveled.

The coefficient of river regime of the Station No. 3 is the largest. According to the information obtained on site, landslides often cause sediment to dam up the upper stream of the Cikeruh River. This is considered one of the reasons for the high coefficient of river regime.

The hydrographs of each Station for 1987 are shown in Fig. E1-2. On the whole, the monthly discharge is larger in March and April, and smaller in August and September.

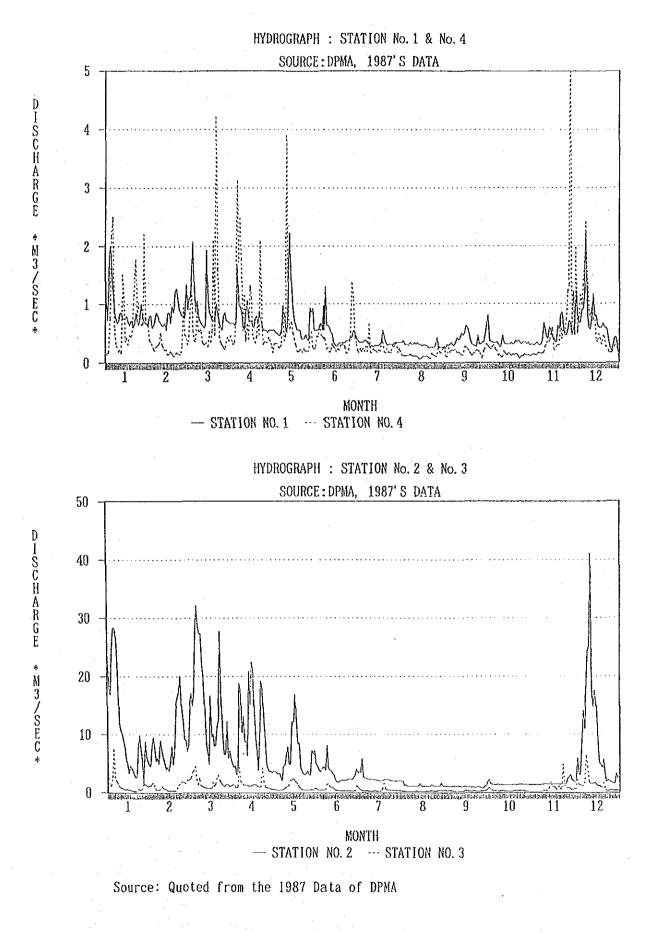


Fig. E1-2 Hydrographs of Hydrologic Stations in the Study Area

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River	Cit	arik	Cik	eruh	Cipamokolan			
Sample N	No.	1	2	3	4	5	6	
[Substance]	[Unit]							
Turbidity	NTU	70	365	215	180	120	106	
Water Temperature	°C	22	24	25	24	26	25	
рН		7.2	7.2	7.2	7.4	8.3	7.7	
BOD	mg/l	1.4	3.3	3.1	7.2	23	12	
COD	mg/l	6.9	23	36	17	34	23	
Coliform	MPN/100ml	4.6 x 10 ⁵	1.2 x 10 ⁵	9.5 x 10 ⁴	1.1 x 10 ⁵	1.7 x 10 ⁵	6.1 x 10 ⁵	
Ammonia (NH4-N)	mg/l	0.36	0.96	0.45	1.8	8.6	4.3	
Nitrate (NO3-N)	mg/l	0.33	0.66	0.46	0.42	0.21	0.34	
Nitrite (NO2-N)	mg/l	0.02	0.16	0.012	0.224	0.012	0.119	
Sampling Date		20/1/92	20/1/92	3/12/91	21/1/92	22/1/92	22/1/92	

E2 River Water Quality in Study Area

Note

Note Sample No. 1 Citarik - Cicalengka Sample No. 2 Citarik - Sapan Sample No. 3 Cikeruh - Cikeruh Sample No. 4 Cikeruh - Sapan Sample No. 5 Cipamokolan - Jl. Soekarno Hatta Sample No. 6 Cipamokolan - Ciwastra

Source: DPMA

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E3 Supply of Agrochemicals (Pesticides) by P. T. Pertani at Kab. Bandung

•••	•		-				
Brand name	Group	Quantity	Active ingr	Chem	Content	Persist	Toxicity
Insecticides used in rice							
Indobas 500ec	I.R.PL	51,735.0	BPMC	СВ	500 g/i		
Dharmabas 500cc	I.R.PL	1,746.5	BPMC	СВ	500 g/l		
Hassa 50ec	I.R.PL	1,112.0	BPMC	CB	500 g/l		
Hopcin 50ec	I. R. PL	1,024.0	BPMC	СВ	460 g/l		
Mipcin 50wp	I.R.PL	522.0	MIPC	CB	50 %		
Applaud 100ec	I.R.PL	90.0	Buprofezin	?	100 g/l		
Dharmacin 50wp	I.R.PL	40.0	MIPC	CB	50 %		
Subtot liq & powd form		56,269.5					
Dharmafur 3g	I. R. G	47,914.0	Carbofuran	СВ	3 %		
Furadan 3g	I. R. G	24,116.0	Carbofuran	CB	3 %		
Curaterr 3g	I. R. G	17,733.0	Carbofuran	CB	3 %		
Indofuran 3g	I.R.G	3,898.0	Carbofuran	СВ	3 %		
Subtot granular form		93,661.0	- 				
Insecticides used in palay	vija (second	crop)					
Thiodan 35ec	Ins. P. PL	9,949.5 f	Endosulfan	OCL	350 g/l		high
Dursban 20ec	I.P.PL	9,573.0 f	Chlorpyrifos	OP	200 g/l		
Gusadrin 150wsc	I.P.PL	1,175.0 f	Monocrotophos	OP	151 g/l		
Petroban 200ec	I.P.PL	883.0 f	Chlorpyrifos	OP	200 g/l		
Basmiban 200ec	I.P.PL	842.0 f	Chlorpyrifos	OP	200 g/l		
Mikarb 50wp	I.P.PL	50.5	MIPC	СВ	51.3 %		
Basudin 60ec	I.P.PL	47.5 f	Diazinon	OP	600 g/l		
Seyin 85s	I.P.PL	2.0 f	Carbaryl	СВ	85 %	· .	
Subtot liq & powd form		22,522.5	-				
Other Pesticides			······································				
Klerat	Rod	4,609.0	Brodifacoum		0.003 %		
Racumin	Rod	100.0	Coumatatratyl		0.04 – 2%		
Benlate	Fung	2.0	Benomyl		50 %	low	
Grandtotal		177,164.0					

Pesticide types and quantities used in Kabupaten Bandung supplied by PT Pertani in 1989 (Kg or lt) XI. 1

Note: f-forbidden on sawah rice (Inpres 1986)

Abbreviations under column "Group"

I : insecticide

R : rice PL : powder or liquid G : granular



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