

APPENDICES

APPENDIX A.

HOUSEHOLD QUESTIONNAIRE

1. Interview Schedule No. _____

2. Location: _____

Code for Location: (1)Lesseb; (2)Boyacaoan ; (3)Lengaoan ; (4)Capinitan

3. Programme Intervention (y/n)

Code for programme intervention: (1) y = with programme intervention; (2) n = without programme

Intervention

Name of Respondent (Optional): _____

4. Ethnic Group: _____

Code for Ethnic Group: (1) Bontoc; (2) Benguet; (3) Ifugao; (4) Apayao;
(5) Kalinga; (6) Ilocano; (7) Tagalog; (8) Others

I. Demographic Data

1.1. Household Structure

5. Household Data

HH Member	Relation to HH Head	Gender	Highest Educational Attainment	Civil Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
9.				

Code for relation to household head: (1) Wife; (2) Son; (3) Daughter; (4) Son's Wife;
(5) Daughter's Husband; (6) Elders; (7) Others

Code for gender: (1) Male; (2) Female

Code for highest educational attainment: (1) No Schooling; (2) With some elementary education; (3) Elementary graduate; (4) With some high school education; (5) High school graduate; (6) With some college education; (7) College graduate; (8) Others

Code for civil status: (1) Married; (2) Single; (3) Widow(er); (4) Legally separated

6. Dwelling (Housing)

Type of Dwelling	Ownership	HH Material Assets
1		
2		
3		
n		

Code for type of dwelling: (1) Concrete; (2) Semi-concrete; (3) Wooden; (4) G.I sheet; (5) Others

Code for ownership: (1) Private; (2) Rented; (3) Others

Code for material assets: (1) Television; (2) Component; (3) Transistor radio; (4) Gas range; (5) Washing machine; (6) Others

II. Land Ownership and Land Use

7. Land Ownership

Total Area (Ha)	No. of Parcels	No. of Years Owned	Land Type

Code for land type: (1) Private land; (2) Public land

8. Land Use

Land Use	Area (Ha)	Approximate Elevation	Mode of use	Mode of Agreement
Forest				
Grassland/ Fallow				
House Settlement				
Vegetable Gardens				
Rice Paddies				
Tenanted (Rent)				
Others				

Code for mode of use: (1) Private Land; (2) Communal Land (Public Land); (3) Rent Out; (4) Others

Code for mode of agreement: (1) Owner; (2) Leasehold; (3) Sharecrop; (4) Forest Lease Agreement
(5) Others

III. Production System

9. Crop Production and Farm Income (For previous cropping year)

Crops Planted	Area Planted (Ha)	When Planted	When Harvested	Total Yield	Total Income
1					
2					
3					
4					
n					

Code for total income: (1) Less than 10,000 Pesos; (2) 10,000-20,000 Pesos; (3) 20,001-30,000 Pesos

(4) 30,001-40,000 Pesos; (5) 40,001-50,000 Pesos; (6) 50,001-60,000 Pesos;

(7) Others

10. Farm and Watershed Inputs

Type of crop	Input																		
	Land Prep.			Sowing			Fertiliser			Irrigation			Weeding			Harvesting			
	Type	U	Cost	Type	U	Cost	Type	U	Cost	Type	U	Cost	Type	U	Cost	Type	U	Cost	
1																			
2																			
3																			
4																			
5																			
n																			

Code for type of input: (1) Plough (Hoe);(2) Shovel; (3) Bolo; (4) Spading fork; (5) Tractor; (6) Knapsack sprayer; (7) Hose; (8) Rain burst;(9) Seeds (10) Wheelbarrow;(11) Digging bars; (12) Organic fertiliser; (13) Inorganic fertiliser; (14) Insecticides; (15) Others

11. Labour use in farm cultural management

Crops Planted Ploughing Sowing	Area Planted Fertilising	Labour Use							
		Fertilising		Irrigating		Weeding		Harvesting	
		m-d	Type	m-d	Type	m-d	Type	m-d	Type
1									
2									
3									
n									

m-d = mandays

Code for type of labour: (1) Male family labour; (2) Female family labour; (3) Male and female family Labour; (4) Paid labour; (5) Contract labour; (6) Others

12. Forest/ Watershed Inputs

Management	Land Preparation			Planting			Maintenance		
	Type	Unit	Cost	Type	Unit	Cost	Type	Unit	Cost

Code for Type: (1) Sickle; (2) Bolo; (3) Shovel; (4) Digging Bars; (5) Plastic Bags; (6) Hose; (7) Watering Can; (8) Inorganic Fertilizer; (9) Organic Fertilizer; (10) Tree Seeds; (11) Seedlings; (12) Others

13. Labour for Forest Management Strategies

Crops Planted	A R E A	Labour Use											
		Ploughing		Sowing		Fertilizing		Irrigating		Weeding		Harvesting	
		m-d	t	m-d	t	m-d	t	m-d	t	m-d	t	m-d	t
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													

14. Livestock Ownership and Income Derived

Types of Animals/Livestock	No. of heads	Main Use	Production/Year (no.)	Consumption	Income (Sale/Animal)
1. Cow					
2. Carabao					
3. Horse					
4. Goat					
5. poultry					
6. piggery					

Code for main use: (1) Ploughing; (2) Meat production; (3) For transport of products; (4) Fertilizer from manure; (5) Others

15. Other Productive Assets

Types of Assets	Number	Tree Spp.	Main Use	Estimated Cost
Trees				
Hand Tractor				
Power Sprayer				
Jeepney				
Truck				
Water Pump				
Grass Cutter				
Others				

Code for tree species: (1) Pine tree; (2) Alnus; (3) Jackfruit; (4) Others

Code for main use of trees: (1) fuel wood; (2) Construction materials; (3) Forest conservation; (4) Food from fruits; (5) Others

Code for main use of tractors: (1) Ploughing own field; (2) Rent to others; (3) Farm product transport; (4) Others

Code for main use of water pump: (1) Irrigating own farm; (2) Rent to others; (3) Others

Code for main use of power sprayer: (1) Insecticide spraying own crops; (2) Rent to others; (3) Others

Code for main use of jeep and truck: (1) Mass transport of people; (2) Transport of own product to market; (3) Rent for transport of products of others; (4) Others

16. Source of Capital

Capital Source	Repayment Mode

Code for capital source : (1) Own Saving ; (2) Credit from bank ; (3) Credit from relatives and friends; (4) Provided by landowner; (5) Others

17. Off-Farm Income

Other Sources of Income	HH Member Involved	Estimated Annual Income
Carpenter		
Mechanic		
Plumber		
Baggage Man		
Store Keeper		
Market Vendor		
Janitor		
Welder		
Electrician		
Mine Worker		
Remittances (Overseas)		

Code for household member involved: (1) Husband; (2) wife; (3) Son; (4) Daughter; (5) Son's wife; (6) Daughter's husband; (7) Others

Code for estimated annual income: (1) Less than 10,000 pesos; (2) 10,000-20,000 pesos; (3) 20,001-30,000 pesos; (4) 30,001-40,000 pesos; (5) 40,001-50,000 pesos (6) 50,001-60,000 pesos; (7) Others

17. Soil and Water Conservation (SWC) in Upland Farms and Watershed Areas

SOIL AND WATER CONSERVATION	ADOPTED STRATEGIES	REASON FOR ADOPTION	AREA OF ESTAB.	PERCEPTION
A. UPLAND FARMING				
Rice Cropping				
Intercropping				
Others				
B. UPLAND FARM SWC				
Terracing with Stone				
Terracing w/o Stone				
Contour Farming with Hedgerows				
Contour Farming w/o Hedgerows				
Irrigation Canal Estab.				
Others				
C. WATERSHED SWC				
Reforestation				
Nursery Establishment				
Fire line Construction				
Gabion Construction				
Others				

Code for strategies: (1) Family labor; (2) Paid labor; (3) Collective action; (4) Others

Code for reason for adoption: (1) Reduce erosion; (2) Increase production ;(3) Increase fertility; (4) Water for domestic use; (5) Water for irrigation; (6) Others

Code for area of establishment: (1) Private land; (2) Public land; (3) Others

Code for perception of effectiveness: (1) Highly effective; (2) Moderately effective; (3) Not effective

V. Marketing and Pricing of Products

18. Where do you sell your products and how do you determine the price of products?

Source	Marketing Method	Mode of Transport	Pricing

Code for Market source: (1) Local (Within community); (2) Municipal Market; (3) Regional Market; (4) National Market; (5) Others

Code for marketing method: (1) Direct to market; (2) Through middlemen; (3) Buyers buy from farm; (4) Through cooperatives; (5) others

Code for mode of transport: (1) Through own vehicle; (2) Through hired vehicle; (3) Buyers get products from farm; (4) Others

Code for pricing: (1) Prevailing market price; (2) Set own price of products; (3) Buyers set price; (4) Others

VI. Social Support System

19. What internal and external local organizations are present in your area?

Organization	Type of Organization	Type of Service	Opinion on Degree of Service Rendered
Dept. of Environment and Natural Resources Dept. of Agriculture Dept. of Health Dept. of Education Banks Others			

Code for type of organization: (1) Local Government Units; (2) Non-Government Organizations; (3) Private Organizations (4) Local Informal Organizations; (5) Others

Code for Type of services: (1) Extension and Training; (2) Education ; (3) Health; (4) Credit; (5) Others

Code for Opinion for degree of services rendered: (1) Highly Effective; (2) Moderately Effective; (3) Not Effective (Why?)

20. What organization are you a member?

Name of Organization	Participation	Type of Organization	Reason for Joining

Code for Participation: (1) Officer (2) Member

Code for Type of organization: (1) Formal; (2) Informal

VI. Use and Role of Watershed Resources

21. What watershed resources do you use and for what purpose do you use them?

Watershed Resources	Y/N	Main Use	HH Member Responsible for Use	Perceived Role of Resource	Importance to Own Use or Common Use
Forest Areas					
Water Source					
Non-Timber Forest Products					
Open Lands					
Grasslands					
Others					

Code for main use: (1) Timber for construction; (2) Fuel wood; (3) Food; (4) Medicinal Value; (5) Grazing; (6) Grass and sticks for thatch roofing and shed; (7) Irrigation water; (8) Sale from fuel wood; (9) Water for domestic use; (10) Others

Code for household member responsible for use: (1) Male Head; (2) Wife; (3) Grown up children; (4) Young Children; (5) Others

Code for perceived role of resources: (1) Production role; (2) Protection role; (3) Environmental role; (4) Water value; (5) Others

Code for importance to own or common use: (1) Own use; (2) Common Use

VIII. Risks and problems Encountered

22. What are the risks and problems that you encountered in you upland farming systems and watershed resource management systems? Please enumerate and rank according to severity.

Risks and Problems	Rank
1. Pests and Diseases 2. Destruction of crops from typhoon 3. Lack of irrigation water 4. Lack of capital 5. Lack of labor 6. Low price of products 7. Others	

Code for rank: (1) First priority; (1) Second priority; (3) Third priority; (4) Fourth priority; (5) Others

23. How do you cope with such risks and problems encountered? Please enumerate and rank according to priority

Coping Strategies	Rank
1. Borrow money from bank 2. Borrow money from relatives and friends 3. Look for employment within community 4. Look for work outside the community 5. Others	

Code for rank: (1) First priority; (2) Second priority; (3) Third priority; (4) Fourth priority; (5) Others

IX. Food Security

24. Is there enough food for the family? _____ Yes; _____ No

25. Where do you get your food supply? Please rank according to priority.

Food Source	Rank
1. From farm produce 2. From salary/wages 3. Provided by relatives 4. Others	

Code for rank: (1) First priority; (2) Second priority; (3) Third priority; (4) Fourth priority; (5) Others

X. Perception in Change in Land Use

26. In your opinion are there changes in land use in your area over the last 20 years?

Land use	Change	
	Last 10 years	Last 20 years
1. Upland Farms		
2. Forest Areas		
3. Water Sources (Streams, Creeks)		
4. Grassland Areas		
5. Others		

Code for changes: (1) No change; (2) Moderate increase; (3) High increase; (4) Moderate decrease
(5) High decrease

Focus Group Checklist

1. History of the area in relation to watershed management, forest management and farming.
 - The people and population
 - Land Tenure System
 - Land and household structure
 - Land uses

2. Natural resource use management
 - Main use of watershed resources for livelihoods
 - Causes of degradation of watershed areas
 - Activities to reduce degradation
 - Assistance from external agencies for watershed rehabilitation

3. Rules and regulations regarding the use of forest and watershed areas.
 - Are there existing rules and regulations on forest and watershed management? Farming systems and practices?
 - Are the rules formal or informal and how are they being implemented?
 - Are there customary laws and how does it jibe with government policies?
 - Are there collective actions regarding the protection of the forest and watershed resources and the upland farms as well?

4. Gender Differentiation
 - How is access to land and other resources between the males and the females in the community?
 - How is land divided or distributed among household members?
 - How is work differentiated between the males and the females? What type of work do males and females perform?
 - How is decision-making carried out in the household?

- 5 Customs and Traditions in the Community
 - What customs and traditions are present in the community in relation to watershed, forest and farm practices?
 - How are these traditions carried out? Is it still in place or are they being replaced by modern ways?

APPENDIX B. Analyses of Variance and Bonferroni's Comparison of Means

APPENDIX TABLE 1. ANOVA on Respondent's Age, Gender and Highest Educational Attainment

		Sum of Squares	df	Mean Square	F	Sig.
AGE	Between Groups	495.469	3	165.156	1.077	.361
	Within Groups	23926.375	156	153.374		
	Total	24421.844	159			
GENDER	Between Groups	.475	3	.158	.358	.783
	Within Groups	68.900	156	.442		
	Total	69.375	159			
EDUC	Between Groups	7.669	3	2.556	.976	.406
	Within Groups	408.575	156	2.619		
	Total	416.244	159			

APPENDIX TABLE 2. ANOVA on Dwelling Type, Dwelling Ownership and Household Material Asset

		Sum of Squares	df	Mean Square	F	Sig.
DWELLING TYPE	Between Groups	20.919	3	6.973	3.555	.016
	Within Groups	306.025	156	1.962		
	Total	326.944	159			
DWELLING OWN	Between Groups	.369	3	.123	.889	.448
	Within Groups	21.575	156	.138		
	Total	21.944	159			
HOUSE MATERIAL ASSETS	Between Groups	92.319	3	30.773	4.701	.004
	Within Groups	1021.125	156	6.546		
	Total	1113.444	159			

APPENDIX TABLE 2a. Multiple Comparisons on Dwelling Type and Household Material Assets

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Dwelling Type	1.00	2.00	.7750	.3132	.086	-6.1931E-02	1.6119
		3.00	-.1750	.3132	1.000	-1.0119	.6619
		4.00	7.500E-02	.3132	1.000	-.7619	.9119
	2.00	1.00	-.7750	.3132	.086	-1.6119	6.193E-02
		3.00	-.9500*	.3132	.017	-1.7869	-.1131
		4.00	-.7000	.3132	.161	-1.5369	.1369
	3.00	1.00	.1750	.3132	1.000	-.6619	1.0119
		2.00	.9500*	.3132	.017	.1131	1.7869
		4.00	.2500	.3132	1.000	-.5869	1.0869
	4.00	1.00	-7.5000E-02	.3132	1.000	-.9119	.7619
		2.00	.7000	.3132	.161	-.1369	1.5369
		3.00	-.2500	.3132	1.000	-1.0869	.5869
Household Material Assets	1.00	2.00	-1.3750	.5721	.104	-2.9038	.1538
		3.00	-2.0750*	.5721	.002	-3.6038	-.5462
		4.00	-.8250	.5721	.908	-2.3538	.7038
	2.00	1.00	1.3750	.5721	.104	-.1538	2.9038
		3.00	-.7000	.5721	1.000	-2.2288	.8288
		4.00	.5500	.5721	1.000	-.9788	2.0788
	3.00	1.00	2.0750*	.5721	.002	.5462	3.6038
		2.00	.7000	.5721	1.000	-.8288	2.2288
		4.00	1.2500	.5721	.182	-.2788	2.7788
	4.00	1.00	.8250	.5721	.908	-.7038	2.3538
		2.00	-.5500	.5721	1.000	-2.0788	.9788
		3.00	-1.2500	.5721	.182	-2.7788	.2788

*. The mean difference is significant at the .05 level. (Note: Location 1= Lesseb; Location 2= Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

APPENDIX TABLE 3. ANOVA on Land Total, No. of Parcels, No. of Years Owned

		Sum of Squares	df	Mean Square	F	Sig.
LANDTOT	Between Groups	123952.4	3	41317.454	1.013	.389
	Within Groups	6363326	156	40790.554		
	Total	6487279	159			
NOPARCEL	Between Groups	110.522	3	36.841	2.760	.044
	Within Groups	2082.230	156	13.348		
	Total	2192.751	159			
YEAROWN	Between Groups	7430.769	3	2476.923	12.914	.000
	Within Groups	29921.425	156	191.804		
	Total	37352.194	159			

APPENDIX TABLE 3a. Multiple Comparisons on No. of Land Parcels and No. of Years Owned

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Number of Land Parcels	1.00	2.00	-1.20943	.81693	.845	-3.3925	.9737
		3.00	-1.15000	.81693	.967	-3.3331	1.0331
		4.00	-2.35000*	.81693	.027	-4.5331	-.1669
	2.00	1.00	1.20943	.81693	.845	-.9737	3.3925
		3.00	.05943	.81693	1.000	-2.1237	2.2425
		4.00	-1.14057	.81693	.988	-3.3237	1.0425
	3.00	1.00	1.15000	.81693	.967	-1.0331	3.3331
		2.00	-.05943	.81693	1.000	-2.2425	2.1237
		4.00	-1.20000	.81693	.863	-3.3831	.9831
	4.00	1.00	2.35000*	.81693	.027	.1669	4.5331
		2.00	1.14057	.81693	.988	-1.0425	3.3237
		3.00	1.20000	.81693	.863	-.9831	3.3831
Number of Years Owned	1.00	2.00	14.55000*	3.09680	.000	6.2743	22.8257
		3.00	15.02500*	3.09680	.000	6.7493	23.3007
		4.00	17.15000*	3.09680	.000	8.8743	25.4257
	2.00	1.00	-14.55000*	3.09680	.000	-22.8257	-6.2743
		3.00	.47500	3.09680	1.000	-7.8007	8.7507
		4.00	2.60000	3.09680	1.000	-5.6757	10.8757
	3.00	1.00	-15.02500*	3.09680	.000	-23.3007	-6.7493
		2.00	-.47500	3.09680	1.000	-8.7507	7.8007
		4.00	2.12500	3.09680	1.000	-6.1507	10.4007
	4.00	1.00	-17.15000*	3.09680	.000	-25.4257	-8.8743
		2.00	-2.60000	3.09680	1.000	-10.8757	5.6757
		3.00	-2.12500	3.09680	1.000	-10.4007	6.1507

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2= Boyacaoan; Location 3=Lengaoan; Location 4= Capinitan)

APPENDIX TABLE 4. ANOVA on Land Use (Area)

		Sum of Squares	df	Mean Square	F	Sig.
LUFA	Between Groups	1.433	3	.478	2.424	.068
	Within Groups	30.752	156	.197		
	Total	32.185	159			
LUHA	Between Groups	1.910E-03	3	6.367E-04	1.726	.164
	Within Groups	5.753E-02	156	3.688E-04		
	Total	5.944E-02	159			
LUVA	Between Groups	4.575	3	1.525	7.133	.000
	Within Groups	33.351	156	.214		
	Total	37.926	159			
LURA	Between Groups	1.493E-02	3	4.975E-03	2.302	.079
	Within Groups	.337	156	2.161E-03		
	Total	.352	159			
LUTA	Between Groups	.000	3	.000	.	.
	Within Groups	.000	156	.000		
	Total	.000	159			

APPENDIX TABLE 4a. Multiple Comparisons on Land Use (Vegetable Area)

Dependent Variable: LUVA

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.308338*	.103390	.020	-.584629	-3.2046E-02
	3.00	-.468322*	.103390	.000	-.744614	-.192031
	4.00	-.221650	.103390	.202	-.497942	5.46417E-02
2.00	1.00	.308338*	.103390	.020	3.20458E-02	.584629
	3.00	-.159985	.103390	.743	-.436277	.116307
	4.00	8.669E-02	.103390	1.000	-.189604	.362979
3.00	1.00	.468322*	.103390	.000	.192031	.744614
	2.00	.159985	.103390	.743	-.116307	.436277
	4.00	.246673	.103390	.109	-2.9619E-02	.522964
4.00	1.00	.221650	.103390	.202	-5.4642E-02	.497942
	2.00	-8.669E-02	.103390	1.000	-.362979	.189604
	3.00	-.246673	.103390	.109	-.522964	2.96192E-02

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

CONTINUATION OF APPENDIX TABLE 4. ANOVA on Land Use (Mode of Use)

		Sum of Squares	df	Mean Square	F	Sig.
Forest Area	Between Groups	21.119	3	7.040	14.550	.000
	Within Groups	75.475	156	.484		
	Total	96.594	159			
House Area	Between Groups	2.119	3	.706	3.141	.027
	Within Groups	35.075	156	.225		
	Total	37.194	159			
Veg. Area	Between Groups	2.275	3	.758	2.533	.059
	Within Groups	46.700	156	.299		
	Total	48.975	159			
Rice Paddy Area	Between Groups	5.400	3	1.800	10.400	.000
	Within Groups	27.000	156	.173		
	Total	32.400	159			
Tenant ed Area	Between Groups	.000	3	.000	.	.
	Within Groups	.000	156	.000		
	Total	.000	159			

APPENDIX TABLE 4a. Multiple Comparisons on Land Use(Mode of Use)

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Forest Area	1.00	2.00	.5750*	.1555	.002	.1594	.9906
		3.00	1.0250*	.1555	.000	.6094	1.4406
		4.00	.5250*	.1555	.006	.1094	.9406
	2.00	1.00	-.5750*	.1555	.002	-.9906	-.1594
		3.00	.4500*	.1555	.026	3.436E-02	.8656
		4.00	-5.0000E-02	.1555	1.000	-.4656	.3656
	3.00	1.00	-1.0250*	.1555	.000	-1.4406	-.6094
		2.00	-.4500*	.1555	.026	-.8656	-3.4364E-02
		4.00	-.5000*	.1555	.010	-.9156	-8.4364E-02
	4.00	1.00	-.5250*	.1555	.006	-.9406	-.1094
		2.00	5.0000E-02	.1555	1.000	-.3656	.4656
		3.00	.5000*	.1555	.010	8.436E-02	.9156
House Area	1.00	2.00	-.2500	.1060	.118	-.5333	3.334E-02
		3.00	5.0000E-02	.1060	1.000	-.2333	.3333
		4.00	-2.5000E-02	.1060	1.000	-.3083	.2583
	2.00	1.00	.2500	.1060	.118	-3.3341E-02	.5333
		3.00	.3000*	.1060	.032	1.666E-02	.5833
		4.00	.2250	.1060	.212	-5.8341E-02	.5083
	3.00	1.00	-5.0000E-02	.1060	1.000	-.3333	.2333
		2.00	-.3000*	.1060	.032	-.5833	-1.6659E-02
		4.00	-7.5000E-02	.1060	1.000	-.3583	.2083
	4.00	1.00	2.5000E-02	.1060	1.000	-.2583	.3083
		2.00	-.2250	.1060	.212	-.5083	5.834E-02
		3.00	7.5000E-02	.1060	1.000	-.2083	.3583
Rice Paddy Area	1.00	2.00	.1500	9.303E-02	.653	-9.8595E-02	.3986
		3.00	.1500	9.303E-02	.653	-9.8595E-02	.3986
		4.00	-.3000*	9.303E-02	.009	-.5486	-5.1405E-02
	2.00	1.00	-.1500	9.303E-02	.653	-.3986	9.860E-02
		3.00	.0000	9.303E-02	1.000	-.2486	.2486
		4.00	-.4500*	9.303E-02	.000	-.6986	-.2014
	3.00	1.00	-.1500	9.303E-02	.653	-.3986	9.860E-02
		2.00	.0000	9.303E-02	1.000	-.2486	.2486
		4.00	-.4500*	9.303E-02	.000	-.6986	-.2014
	4.00	1.00	.3000*	9.303E-02	.009	5.140E-02	.5486
		2.00	.4500*	9.303E-02	.000	.2014	.6986
		3.00	.4500*	9.303E-02	.000	.2014	.6986

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

TABLE 5. ANOVA on Crop Yield (Kg) Per Hectare

		Sum of Squares	df	Mean Square	F	Sig.
Cabbage	Between Groups	1.34E+10	3	4466230071	.999	.395
	Within Groups	6.97E+11	156	4470932461		
	Total	7.11E+11	159			
Potato	Between Groups	1.29E+10	3	4289098620	3.575	.015
	Within Groups	1.87E+11	156	1199726534		
	Total	2.00E+11	159			
Carrots	Between Groups	7.51E+10	3	2.504E+10	9.601	.000
	Within Groups	4.07E+11	156	2608001459		
	Total	4.82E+11	159			
Baguio Beans	Between Groups	4.34E+08	3	144778829.8	5.000	.002
	Within Groups	4.52E+09	156	28955373.64		
	Total	4.95E+09	159			
Chinese Cabbage	Between Groups	6.47E+08	3	215601612.8	.911	.437
	Within Groups	3.69E+10	156	236733429.6		
	Total	3.76E+10	159			
Sweet Peas	Between Groups	10120024	3	3373341.218	3.017	.032
	Within Groups	1.74E+08	156	1118083.870		
	Total	1.85E+08	159			
Sweet Potato	Between Groups	7.47E+08	3	248964782.7	1.503	.216
	Within Groups	2.58E+10	156	165641270.0		
	Total	2.66E+10	159			
Bell Pepper	Between Groups	1.40E+09	3	467651677.3	8.711	.000
	Within Groups	8.38E+09	156	53686871.90		
	Total	9.78E+09	159			
Lettuce	Between Groups	4118750	3	1372916.667	.803	.494
	Within Groups	2.67E+08	156	1710737.179		
	Total	2.71E+08	159			
Celery	Between Groups	15302775	3	5100925.114	1.723	.165
	Within Groups	4.62E+08	156	2960539.848		
	Total	4.77E+08	159			

Table 5a. Multiple Comparisons on Crop Yield (Kg) Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Potato	1.00	2.00	-22990.673*	7745.0840	.021	-43688.0168	-2293.3297
		3.00	-17509.770	7745.0840	.151	-38207.1138	3187.5733
		4.00	-6838.6905	7745.0840	1.000	-27536.0340	13858.6530
	2.00	1.00	22990.6733*	7745.0840	.021	2293.3297	43688.0168
		3.00	5480.9030	7745.0840	1.000	-15216.4405	26178.2465
		4.00	16151.9828	7745.0840	.232	-4545.3608	36849.3263
	3.00	1.00	17509.7703	7745.0840	.151	-3187.5733	38207.1138
		2.00	-5480.9030	7745.0840	1.000	-26178.2465	15216.4405
		4.00	10671.0798	7745.0840	1.000	-10026.2638	31368.4233
	4.00	1.00	6838.6905	7745.0840	1.000	-13858.6530	27536.0340
		2.00	-16151.983	7745.0840	.232	-36849.3263	4545.3608
		3.00	-10671.080	7745.0840	1.000	-31368.4233	10026.2638
Carrots	1.00	2.00	41966.6532*	11419.29	.002	11450.6684	72482.6381
		3.00	54926.6198*	11419.29	.000	24410.6349	85442.6046
		4.00	49781.6198*	11419.29	.000	19265.6349	80297.6046
	2.00	1.00	-41966.653*	11419.29	.002	-72482.6381	-11450.6684
		3.00	12959.9665	11419.29	1.000	-17556.0183	43475.9513
		4.00	7814.9665	11419.29	1.000	-22701.0183	38330.9513
	3.00	1.00	-54926.620*	11419.29	.000	-85442.6046	-24410.6349
		2.00	-12959.967	11419.29	1.000	-43475.9513	17556.0183
		4.00	-5145.0000	11419.29	1.000	-35660.9848	25370.9848
	4.00	1.00	-49781.620*	11419.29	.000	-80297.6046	-19265.6349
		2.00	-7814.9665	11419.29	1.000	-38330.9513	22701.0183
		3.00	5145.0000	11419.29	1.000	-25370.9848	35660.9848
Baguio Beans	1.00	2.00	2046.7168	1203.2326	.546	-1168.7059	5262.1394
		3.00	2364.1668	1203.2326	.307	-851.2559	5579.5894
		4.00	-1705.7358	1203.2326	.950	-4921.1584	1509.6869
	2.00	1.00	-2046.7168	1203.2326	.546	-5262.1394	1168.7059
		3.00	317.4500	1203.2326	1.000	-2897.9726	3532.8726
		4.00	-3752.4525*	1203.2326	.013	-6967.8751	-537.0299
	3.00	1.00	-2364.1668	1203.2326	.307	-5579.5894	851.2559
		2.00	-317.4500	1203.2326	1.000	-3532.8726	2897.9726
		4.00	-4069.9025*	1203.2326	.005	-7285.3251	-854.4799
	4.00	1.00	1705.7358	1203.2326	.950	-1509.6869	4921.1584
		2.00	3752.4525*	1203.2326	.013	537.0299	6967.8751
		3.00	4069.9025*	1203.2326	.005	854.4799	7285.3251

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location4=Capinitan)

Continuation of Appendix Table 5a. Multiple Comparisons on Crop Yield (Kg) Per Hectare

Dependent Variable: PEPYPHEC

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	3.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	4.00	-6838.5063*	1638.3967	.000	-11216.8265	-2460.1860
2.00	1.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	3.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	4.00	-6838.5063*	1638.3967	.000	-11216.8265	-2460.1860
3.00	1.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	2.00	.0000	1638.3967	1.000	-4378.3203	4378.3203
	4.00	-6838.5063*	1638.3967	.000	-11216.8265	-2460.1860
4.00	1.00	6838.5063*	1638.3967	.000	2460.1860	11216.8265
	2.00	6838.5063*	1638.3967	.000	2460.1860	11216.8265
	3.00	6838.5063*	1638.3967	.000	2460.1860	11216.8265

*. The mean difference is significant at the .05 level.

APPENDIX TABLE 6. ANOVA on Gross Income (Pesos) from Crops Per Hectare

		Sum of Squares	df	Mean Square	F	Sig.
Cabbage	Between Groups	1.42E+12	3	4.729E+11	.999	.395
	Within Groups	7.39E+13	156	4.734E+11		
	Total	7.53E+13	159			
Potato	Between Groups	2.17E+12	3	7.247E+11	3.451	.018
	Within Groups	3.28E+13	156	2.100E+11		
	Total	3.49E+13	159			
Carrots	Between Groups	1.08E+13	3	3.602E+12	8.324	.000
	Within Groups	6.75E+13	156	4.327E+11		
	Total	7.83E+13	159			
Baguio Beans	Between Groups	6.72E+10	3	2.240E+10	4.302	.006
	Within Groups	8.12E+11	156	5207432549		
	Total	8.80E+11	159			
Chinese Cabbage	Between Groups	3.18E+10	3	1.059E+10	.945	.420
	Within Groups	1.75E+12	156	1.120E+10		
	Total	1.78E+12	159			
Sweet Peas	Between Groups	4.81E+09	3	1602625023	3.150	.027
	Within Groups	7.94E+10	156	508833843.9		
	Total	8.42E+10	159			
Sweet Potato	Between Groups	4.86E+09	3	1619776432	1.571	.199
	Within Groups	1.61E+11	156	1031290254		
	Total	1.66E+11	159			
Bell Pepper	Between Groups	5.61E+11	3	1.871E+11	8.711	.000
	Within Groups	3.35E+12	156	2.147E+10		
	Total	3.91E+12	159			
Lettuce	Between Groups	3.17E+09	3	1057231641	.803	.494
	Within Groups	2.06E+11	156	1317374549		
	Total	2.09E+11	159			
Celery	Between Groups	4.63E+10	3	1.545E+10	1.378	.252
	Within Groups	1.75E+12	156	1.121E+10		
	Total	1.80E+12	159			

APPENDIX TABLE 6a. Multiple Comparisons on Gross Income (Pesos) from Crops Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Potato	1.00	2.00	-305546.06*	102474.8	.020	-579391.5909	-31700.5236
		3.00	-214763.35	102474.8	.226	-488608.8802	59082.1872
		4.00	-90886.104	102474.8	1.000	-364731.6372	182959.4302
	2.00	1.00	305546.06*	102474.8	.020	31700.5236	579391.5909
		3.00	90782.7107	102474.8	1.000	-183062.8229	364628.2444
		4.00	214659.95	102474.8	.227	-59185.5799	488505.4874
	3.00	1.00	214763.35	102474.8	.226	-59082.1872	488608.8802
		2.00	-90782.711	102474.8	1.000	-364628.2444	183062.8229
		4.00	123877.24	102474.8	1.000	-149968.2907	397722.7767
	4.00	1.00	90886.1035	102474.8	1.000	-182959.4302	364731.6372
		2.00	-214659.95	102474.8	.227	-488505.4874	59185.5799
		3.00	-123877.24	102474.8	1.000	-397722.7767	149968.2907
Carrots	1.00	2.00	440216.19*	147091.8	.019	47139.9215	833292.4505
		3.00	665161.38*	147091.8	.000	272085.1158	1058237.645
		4.00	602855.43*	147091.8	.000	209779.1658	995931.6947
	2.00	1.00	-440216.19*	147091.8	.019	-833292.4505	-47139.9215
		3.00	224945.19	147091.8	.769	-168131.0702	618021.4587
		4.00	162639.24	147091.8	1.000	-230437.0202	555715.5087
	3.00	1.00	-665161.38*	147091.8	.000	-1058237.64	-272085.1158
		2.00	-224945.19	147091.8	.769	-618021.4587	168131.0702
		4.00	-62305.950	147091.8	1.000	-455382.2145	330770.3145
	4.00	1.00	-602855.43*	147091.8	.000	-995931.6947	-209779.1658
		2.00	-162639.24	147091.8	1.000	-555715.5087	230437.0202
		3.00	62305.9500	147091.8	1.000	-330770.3145	455382.2145
Baguio Beans	1.00	2.00	28920.1148	16136.04	.450	-14200.5356	72040.7651
		3.00	33405.6763	16136.04	.240	-9714.9741	76526.3266
		4.00	-16153.921	16136.04	1.000	-59274.5713	26966.7293
	2.00	1.00	-28920.115	16136.04	.450	-72040.7651	14200.5356
		3.00	4485.5615	16136.04	1.000	-38635.0888	47606.2118
		4.00	-45074.036*	16136.04	.035	-88194.6861	-1953.3854
	3.00	1.00	-33405.676	16136.04	.240	-76526.3266	9714.9741
		2.00	-4485.5615	16136.04	1.000	-47606.2118	38635.0888
		4.00	-49559.597*	16136.04	.015	-92680.2476	-6438.9469
	4.00	1.00	16153.9210	16136.04	1.000	-26966.7293	59274.5713
		2.00	45074.0357*	16136.04	.035	1953.3854	88194.6861
		3.00	49559.5973*	16136.04	.015	6438.9469	92680.2476

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

Continuation of APPENDIX TABLE 6a. Multiple Comparisons on Gross Income (Pesos) of Crops Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Sweet Peas	1.00	2.00	13520.8333*	5043.9758	.049	41.7154	26999.9511
		3.00	13314.5833	5043.9758	.055	-164.5346	26793.7011
		4.00	9395.8333	5043.9758	.386	-4083.2846	22874.9511
	2.00	1.00	-13520.8333*	5043.9758	.049	-26999.9511	-41.7154
		3.00	-206.2500	5043.9758	1.000	-13685.3679	13272.8679
		4.00	-4125.0000	5043.9758	1.000	-17604.1179	9354.1179
	3.00	1.00	-13314.583	5043.9758	.055	-26793.7011	164.5346
		2.00	206.2500	5043.9758	1.000	-13272.8679	13685.3679
		4.00	-3918.7500	5043.9758	1.000	-17397.8679	9560.3679
	4.00	1.00	-9395.8333	5043.9758	.386	-22874.9511	4083.2846
		2.00	4125.0000	5043.9758	1.000	-9354.1179	17604.1179
		3.00	3918.7500	5043.9758	1.000	-9560.3679	17397.8679
Bell Pepper	1.00	2.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		3.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		4.00	-136770.13*	32767.93	.000	-224336.5316	-49203.7214
	2.00	1.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		3.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		4.00	-136770.13*	32767.93	.000	-224336.5316	-49203.7214
	3.00	1.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		2.00	.0000	32767.93	1.000	-87566.4051	87566.4051
		4.00	-136770.13*	32767.93	.000	-224336.5316	-49203.7214
	4.00	1.00	136770.13*	32767.93	.000	49203.7214	224336.5316
		2.00	136770.13*	32767.93	.000	49203.7214	224336.5316
		3.00	136770.13*	32767.93	.000	49203.7214	224336.5316

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 7. ANOVA on Farm Input Cost (Pesos) Per Hectare

		Sum of Squares	df	Mean Square	F	Sig.
Cabbage	Between Groups	2.66E+11	3	8.871E+10	2.036	.111
	Within Groups	6.80E+12	156	4.356E+10		
	Total	7.06E+12	159			
Potato	Between Groups	1.50E+11	3	5.005E+10	2.662	.050
	Within Groups	2.93E+12	156	1.880E+10		
	Total	3.08E+12	159			
Carrots	Between Groups	2.11E+12	3	7.041E+11	6.043	.001
	Within Groups	1.82E+13	156	1.165E+11		
	Total	2.03E+13	159			
Baguio Beans	Between Groups	8.73E+10	3	2.910E+10	6.579	.000
	Within Groups	6.90E+11	156	4423842578		
	Total	7.77E+11	159			
Chinese Cabbage	Between Groups	2.31E+10	3	7708863787	1.185	.317
	Within Groups	1.02E+12	156	6506508297		
	Total	1.04E+12	159			
Sweet Peas	Between Groups	7.54E+09	3	2513530713	3.836	.011
	Within Groups	1.02E+11	156	655262554.6		
	Total	1.10E+11	159			
Sweet Potato	Between Groups	4.15E+09	3	1384453923	5.637	.001
	Within Groups	3.83E+10	156	245609923.4		
	Total	4.25E+10	159			
Bell Pepper	Between Groups	3.12E+10	3	1.039E+10	11.693	.000
	Within Groups	1.39E+11	156	888261666.5		
	Total	1.70E+11	159			
Lettuce	Between Groups	52724345	3	17574781.60	.949	.419
	Within Groups	2.89E+09	156	18525017.06		
	Total	2.94E+09	159			
Celery	Between Groups	2.84E+08	3	94811981.47	1.016	.387
	Within Groups	1.46E+10	156	93300909.94		
	Total	1.48E+10	159			

APPENDIX TABLE 7a. Multiple Comparisons on Farm Input Cost (Pesos) Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Potato	1.00	2.00	-86110.860*	30658.24	.034	-168039.4946	-4182.2254
		3.00	-51366.610	30658.24	.575	-133295.2448	30562.0243
		4.00	-46000.454	30658.24	.813	-127929.0888	35928.1803
	2.00	1.00	86110.8600*	30658.24	.034	4182.2254	168039.4946
		3.00	34744.2497	30658.24	1.000	-47184.3848	116672.8843
		4.00	40110.4058	30658.24	1.000	-41818.2288	122039.0403
	3.00	1.00	51366.6103	30658.24	.575	-30562.0243	133295.2448
		2.00	-34744.250	30658.24	1.000	-116672.8843	47184.3848
		4.00	5366.1560	30658.24	1.000	-76562.4786	87294.7906
	4.00	1.00	46000.4542	30658.24	.813	-35928.1803	127929.0888
		2.00	-40110.406	30658.24	1.000	-122039.0403	41818.2288
		3.00	-5366.1560	30658.24	1.000	-87294.7906	76562.4786
Carrots	1.00	2.00	251471.31*	76331.48	.007	47489.1618	455453.4527
		3.00	279912.57*	76331.48	.002	75930.4258	483894.7167
		4.00	261544.84*	76331.48	.005	57562.6958	465526.9867
	2.00	1.00	-251471.31*	76331.48	.007	-455453.4527	-47489.1618
		3.00	28441.2640	76331.48	1.000	-175540.8815	232423.4095
		4.00	10073.5340	76331.48	1.000	-193908.6115	214055.6795
	3.00	1.00	-279912.57*	76331.48	.002	-483894.7167	-75930.4258
		2.00	-28441.264	76331.48	1.000	-232423.4095	175540.8815
		4.00	-18367.730	76331.48	1.000	-222349.8755	185614.4155
	4.00	1.00	-261544.84*	76331.48	.005	-465526.9867	-57562.6958
		2.00	-10073.534	76331.48	1.000	-214055.6795	193908.6115
		3.00	18367.7300	76331.48	1.000	-185614.4155	222349.8755
Baguio Beans	1.00	2.00	53387.1667*	14872.53	.003	13643.0081	93131.3254
		3.00	54799.1668*	14872.53	.002	15055.0081	94543.3254
		4.00	18507.7012	14872.53	1.000	-21236.4574	58251.8599
	2.00	1.00	-53387.167*	14872.53	.003	-93131.3254	-13643.0081
		3.00	1412.0000	14872.53	1.000	-38332.1586	41156.1586
		4.00	-34879.466	14872.53	.122	-74623.6241	4864.6931
	3.00	1.00	-54799.167*	14872.53	.002	-94543.3254	-15055.0081
		2.00	-1412.0000	14872.53	1.000	-41156.1586	38332.1586
		4.00	-36291.466	14872.53	.095	-76035.6241	3452.6931
	4.00	1.00	-18507.701	14872.53	1.000	-58251.8599	21236.4574
		2.00	34879.4655	14872.53	.122	-4864.6931	74623.6241
		3.00	36291.4655	14872.53	.095	-3452.6931	76035.6241

*. The mean difference is significant at the .05 level. (Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

Continuation of APPENDIX 7a. Multiple Comparisons on Farm Input Cost (Pesos) Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Sweet Peas	1.00	2.00	16302.6668*	5723.9084	.030	1006.5514	31598.7821
		3.00	16103.1668*	5723.9084	.033	807.0514	31399.2821
		4.00	15040.1668	5723.9084	.057	-255.9486	30336.2821
	2.00	1.00	-16302.667*	5723.9084	.030	-31598.7821	-1006.5514
		3.00	-199.5000	5723.9084	1.000	-15495.6154	15096.6154
		4.00	-1262.5000	5723.9084	1.000	-16558.6154	14033.6154
	3.00	1.00	-16103.167*	5723.9084	.033	-31399.2821	-807.0514
		2.00	199.5000	5723.9084	1.000	-15096.6154	15495.6154
		4.00	-1063.0000	5723.9084	1.000	-16359.1154	14233.1154
	4.00	1.00	-15040.167	5723.9084	.057	-30336.2821	255.9486
		2.00	1262.5000	5723.9084	1.000	-14033.6154	16558.6154
		3.00	1063.0000	5723.9084	1.000	-14233.1154	16359.1154
Sweet Potato	1.00	2.00	2395.8333	3504.3539	1.000	-6968.9220	11760.5885
		3.00	2395.8333	3504.3539	1.000	-6968.9220	11760.5885
		4.00	-9950.2085*	3504.3539	.031	-19314.9637	-585.4533
	2.00	1.00	-2395.8333	3504.3539	1.000	-11760.5885	6968.9220
		3.00	.0000	3504.3539	1.000	-9364.7552	9364.7552
		4.00	-12346.042*	3504.3539	.003	-21710.7970	-2981.2865
	3.00	1.00	-2395.8333	3504.3539	1.000	-11760.5885	6968.9220
		2.00	.0000	3504.3539	1.000	-9364.7552	9364.7552
		4.00	-12346.042*	3504.3539	.003	-21710.7970	-2981.2865
	4.00	1.00	9950.2085*	3504.3539	.031	585.4533	19314.9637
		2.00	12346.0418*	3504.3539	.003	2981.2865	21710.7970
		3.00	12346.0418*	3504.3539	.003	2981.2865	21710.7970
Bell Pepper	1.00	2.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		3.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		4.00	-32227.588*	6664.3142	.000	-50036.7685	-14418.4075
	2.00	1.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		3.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		4.00	-32227.588*	6664.3142	.000	-50036.7685	-14418.4075
	3.00	1.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		2.00	.0000	6664.3142	1.000	-17809.1805	17809.1805
		4.00	-32227.588*	6664.3142	.000	-50036.7685	-14418.4075
	4.00	1.00	32227.5880*	6664.3142	.000	14418.4075	50036.7685
		2.00	32227.5880*	6664.3142	.000	14418.4075	50036.7685
		3.00	32227.5880*	6664.3142	.000	14418.4075	50036.7685

*. The mean difference is significant at the .05 level. (Note: Location 1= Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4= Capinitan)

APPENDIX TABLE 8. ANOVA on Labor Cost (Pesos) Per Hectare

		Sum of Squares	df	Mean Square	F	Sig.
Cabbage	Between Groups	7.41E+08	3	246879959.4	.732	.534
	Within Groups	5.26E+10	156	337332106.3		
	Total	5.34E+10	159			
Potato	Between Groups	5.06E+08	3	168583210.2	3.778	.012
	Within Groups	6.96E+09	156	44623622.77		
	Total	7.47E+09	159			
Carrots	Between Groups	1.35E+10	3	4515271370	7.367	.000
	Within Groups	9.56E+10	156	612867135.3		
	Total	1.09E+11	159			
Baguio Beans	Between Groups	6270750	3	2090250.000	.962	.412
	Within Groups	3.39E+08	156	2171916.667		
	Total	3.45E+08	159			
Chinese Cabbage	Between Groups	1.64E+10	3	5461275000	.863	.462
	Within Groups	9.87E+11	156	6325193700		
	Total	1.00E+12	159			
Sweet Peas	Between Groups	1036688	3	345562.500	.893	.446
	Within Groups	60392750	156	387133.013		
	Total	61429438	159			
Sweet Potato	Between Groups	.000	3	.000	.	.
	Within Groups	.000	155	.000		
	Total	.000	158			
Bell Pepper	Between Groups	2.06E+10	3	6866234123	1.790	.151
	Within Groups	5.98E+11	156	3835519046		
	Total	6.19E+11	159			
Lettuce	Between Groups	747000.0	3	249000.000	.675	.569
	Within Groups	57564000	156	369000.000		
	Total	58311000	159			
Celery	Between Groups	697687.5	3	232562.500	1.658	.178
	Within Groups	21879750	156	140254.808		
	Total	22577438	159			

APPENDIX TABLE 8a. Multiple Comparisons on Labor Cost (Pesos) Per Hectare

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Potato	1.00	2.00	-2775.2930	1493.7139	.390	-6766.9746	1216.3886
		3.00	-5002.3570*	1493.7139	.006	-8994.0386	-1010.6754
		4.00	-2262.1755	1493.7139	.792	-6253.8571	1729.5061
	2.00	1.00	2775.2930	1493.7139	.390	-1216.3886	6766.9746
		3.00	-2227.0640	1493.7139	.828	-6218.7456	1764.6176
		4.00	513.1175	1493.7139	1.000	-3478.5641	4504.7991
	3.00	1.00	5002.3570*	1493.7139	.006	1010.6754	8994.0386
		2.00	2227.0640	1493.7139	.828	-1764.6176	6218.7456
		4.00	2740.1815	1493.7139	.411	-1251.5001	6731.8631
	4.00	1.00	2262.1755	1493.7139	.792	-1729.5061	6253.8571
		2.00	-513.1175	1493.7139	1.000	-4504.7991	3478.5641
		3.00	-2740.1815	1493.7139	.411	-6731.8631	1251.5001
Carrots	1.00	2.00	20672.8185*	5535.6442	.002	5879.8054	35465.8316
		3.00	20799.1517*	5535.6442	.001	6006.1386	35592.1649
		4.00	22149.3185*	5535.6442	.001	7356.3054	36942.3316
	2.00	1.00	-20672.818*	5535.6442	.002	-35465.8316	-5879.8054
		3.00	126.3332	5535.6442	1.000	-14666.6799	14919.3464
		4.00	1476.5000	5535.6442	1.000	-13316.5131	16269.5131
	3.00	1.00	-20799.152*	5535.6442	.001	-35592.1649	-6006.1386
		2.00	-126.3332	5535.6442	1.000	-14919.3464	14666.6799
		4.00	1350.1667	5535.6442	1.000	-13442.8464	16143.1799
	4.00	1.00	-22149.318*	5535.6442	.001	-36942.3316	-7356.3054
		2.00	-1476.5000	5535.6442	1.000	-16269.5131	13316.5131
		3.00	-1350.1667	5535.6442	1.000	-16143.1799	13442.8464

*. The mean difference is significant at the .05 level.(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 11. ANOVA on Types of Labour Used in Forest / Watershed Management

		Sum of Squares	df	Mean Square	F	Sig.
Refo. Land Preparation	Between Groups	199.219	3	66.406	36.687	.000
	Within Groups	282.375	156	1.810		
	Total	481.594	159			
Refo. Planting	Between Groups	169.669	3	56.556	33.512	.000
	Within Groups	263.275	156	1.688		
	Total	432.944	159			
Refo. Maintenance	Between Groups	331.875	3	110.625	38.054	.000
	Within Groups	453.500	156	2.907		
	Total	785.375	159			
Nursery Land Preparation	Between Groups	270.000	3	90.000	47.755	.000
	Within Groups	294.000	156	1.885		
	Total	564.000	159			
Nursery Planting	Between Groups	270.000	3	90.000	45.584	.000
	Within Groups	308.000	156	1.974		
	Total	578.000	159			
Nursery Maintenance	Between Groups	421.875	3	140.625	68.662	.000
	Within Groups	319.500	156	2.048		
	Total	741.375	159			
Fire Line Land Preparation	Between Groups	581.475	3	193.825	54.042	.000
	Within Groups	559.500	156	3.587		
	Total	1140.975	159			
Fire Line Planting	Between Groups	211.425	3	70.475	26.242	.000
	Within Groups	418.950	156	2.686		
	Total	630.375	159			
Fire Line Maintenance	Between Groups	672.969	3	224.323	68.365	.000
	Within Groups	511.875	156	3.281		
	Total	1184.844	159			

APPENDIX TABLE 11a. Multiple Comparisons on Labour Used in Foret/ Watershed Management (Reforestation)

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Refo. Land Preparation	1.00	2.00	-2.5000*	.3008	.000	-3.3039	-1.6961
		3.00	.0000	.3008	1.000	-.8039	.8039
		4.00	-1.8750*	.3008	.000	-2.6789	-1.0711
	2.00	1.00	2.5000*	.3008	.000	1.6961	3.3039
		3.00	2.5000*	.3008	.000	1.6961	3.3039
		4.00	.6250	.3008	.236	-.1789	1.4289
	3.00	1.00	.0000	.3008	1.000	-.8039	.8039
		2.00	-2.5000*	.3008	.000	-3.3039	-1.6961
		4.00	-1.8750*	.3008	.000	-2.6789	-1.0711
	4.00	1.00	1.8750*	.3008	.000	1.0711	2.6789
		2.00	-.6250	.3008	.236	-1.4289	.1789
		3.00	1.8750*	.3008	.000	1.0711	2.6789
Refo. Planting	1.00	2.00	-2.2500*	.2905	.000	-3.0263	-1.4737
		3.00	.0000	.2905	1.000	-.7763	.7763
		4.00	-1.8250*	.2905	.000	-2.6013	-1.0487
	2.00	1.00	2.2500*	.2905	.000	1.4737	3.0263
		3.00	2.2500*	.2905	.000	1.4737	3.0263
		4.00	.4250	.2905	.873	-.3513	1.2013
	3.00	1.00	.0000	.2905	1.000	-.7763	.7763
		2.00	-2.2500*	.2905	.000	-3.0263	-1.4737
		4.00	-1.8250*	.2905	.000	-2.6013	-1.0487
	4.00	1.00	1.8250*	.2905	.000	1.0487	2.6013
		2.00	-.4250	.2905	.873	-1.2013	.3513
		3.00	1.8250*	.2905	.000	1.0487	2.6013
Refo. Maintenance	1.00	2.00	-2.7500*	.3813	.000	-3.7688	-1.7312
		3.00	.0000	.3813	1.000	-1.0188	1.0188
		4.00	-3.0000*	.3813	.000	-4.0188	-1.9812
	2.00	1.00	2.7500*	.3813	.000	1.7312	3.7688
		3.00	2.7500*	.3813	.000	1.7312	3.7688
		4.00	-.2500	.3813	1.000	-1.2688	.7688
	3.00	1.00	.0000	.3813	1.000	-1.0188	1.0188
		2.00	-2.7500*	.3813	.000	-3.7688	-1.7312
		4.00	-3.0000*	.3813	.000	-4.0188	-1.9812
	4.00	1.00	3.0000*	.3813	.000	1.9812	4.0188
		2.00	.2500	.3813	1.000	-.7688	1.2688
		3.00	3.0000*	.3813	.000	1.9812	4.0188

*. The mean difference is significant at the .05 level.

(NOTE: Location1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

Continuation of APPENDIX TABLE 11a. Multiple Comparisons on Types of Labour Used in Forest / Watershed Management (Nursery Operations)

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Nursery Land Preparation	1.00	2.00	.0000	.3070	1.000	-.8203	.8203
		3.00	.0000	.3070	1.000	-.8203	.8203
		4.00	-3.0000*	.3070	.000	-3.8203	-2.1797
	2.00	1.00	.0000	.3070	1.000	-.8203	.8203
		3.00	.0000	.3070	1.000	-.8203	.8203
		4.00	-3.0000*	.3070	.000	-3.8203	-2.1797
	3.00	1.00	.0000	.3070	1.000	-.8203	.8203
		2.00	.0000	.3070	1.000	-.8203	.8203
		4.00	-3.0000*	.3070	.000	-3.8203	-2.1797
	4.00	1.00	3.0000*	.3070	.000	2.1797	3.8203
		2.00	3.0000*	.3070	.000	2.1797	3.8203
		3.00	3.0000*	.3070	.000	2.1797	3.8203
Nursery Planting	1.00	2.00	.0000	.3142	1.000	-.8396	.8396
		3.00	.0000	.3142	1.000	-.8396	.8396
		4.00	-3.0000*	.3142	.000	-3.8396	-2.1604
	2.00	1.00	.0000	.3142	1.000	-.8396	.8396
		3.00	.0000	.3142	1.000	-.8396	.8396
		4.00	-3.0000*	.3142	.000	-3.8396	-2.1604
	3.00	1.00	.0000	.3142	1.000	-.8396	.8396
		2.00	.0000	.3142	1.000	-.8396	.8396
		4.00	-3.0000*	.3142	.000	-3.8396	-2.1604
	4.00	1.00	3.0000*	.3142	.000	2.1604	3.8396
		2.00	3.0000*	.3142	.000	2.1604	3.8396
		3.00	3.0000*	.3142	.000	2.1604	3.8396
Nursery Maintenance	1.00	2.00	.0000	.3200	1.000	-.8552	.8552
		3.00	.0000	.3200	1.000	-.8552	.8552
		4.00	-3.7500*	.3200	.000	-4.6052	-2.8948
	2.00	1.00	.0000	.3200	1.000	-.8552	.8552
		3.00	.0000	.3200	1.000	-.8552	.8552
		4.00	-3.7500*	.3200	.000	-4.6052	-2.8948
	3.00	1.00	.0000	.3200	1.000	-.8552	.8552
		2.00	.0000	.3200	1.000	-.8552	.8552
		4.00	-3.7500*	.3200	.000	-4.6052	-2.8948
	4.00	1.00	3.7500*	.3200	.000	2.8948	4.6052
		2.00	3.7500*	.3200	.000	2.8948	4.6052
		3.00	3.7500*	.3200	.000	2.8948	4.6052

*. The mean difference is significant at the .05 level.

(NOTE: Location 1= Lesseb; 2=Boyacaoan; 3= Lengaoan; 4= Capinitan)

Continuation of APPENDIX TABLE 11a. Multiple Comparisons on Type of Labour Used in Forest / Watershed Management (Fire Line Construction)

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Fire Line Land Preparation	1.00	2.00	-3.1500*	.4235	.000	-4.2816	-2.0184
		3.00	.0000	.4235	1.000	-1.1316	1.1316
		4.00	-4.3000*	.4235	.000	-5.4316	-3.1684
	2.00	1.00	3.1500*	.4235	.000	2.0184	4.2816
		3.00	3.1500*	.4235	.000	2.0184	4.2816
		4.00	-1.1500*	.4235	.044	-2.2816	-1.8352E-02
	3.00	1.00	.0000	.4235	1.000	-1.1316	1.1316
		2.00	-3.1500*	.4235	.000	-4.2816	-2.0184
		4.00	-4.3000*	.4235	.000	-5.4316	-3.1684
	4.00	1.00	4.3000*	.4235	.000	3.1684	5.4316
		2.00	1.1500*	.4235	.044	1.835E-02	2.2816
		3.00	4.3000*	.4235	.000	3.1684	5.4316
Fire Line Planting	1.00	2.00	-.4750	.3664	1.000	-1.4542	.5042
		3.00	.0000	.3664	1.000	-.9792	.9792
		4.00	-2.7750*	.3664	.000	-3.7542	-1.7958
	2.00	1.00	.4750	.3664	1.000	-.5042	1.4542
		3.00	.4750	.3664	1.000	-.5042	1.4542
		4.00	-2.3000*	.3664	.000	-3.2792	-1.3208
	3.00	1.00	.0000	.3664	1.000	-.9792	.9792
		2.00	-.4750	.3664	1.000	-1.4542	.5042
		4.00	-2.7750*	.3664	.000	-3.7542	-1.7958
	4.00	1.00	2.7750*	.3664	.000	1.7958	3.7542
		2.00	2.3000*	.3664	.000	1.3208	3.2792
		3.00	2.7750*	.3664	.000	1.7958	3.7542
Fire Line Maintenance	1.00	2.00	-3.1250*	.4050	.000	-4.2074	-2.0426
		3.00	.0000	.4050	1.000	-1.0824	1.0824
		4.00	-4.7500*	.4050	.000	-5.8324	-3.6676
	2.00	1.00	3.1250*	.4050	.000	2.0426	4.2074
		3.00	3.1250*	.4050	.000	2.0426	4.2074
		4.00	-1.6250*	.4050	.001	-2.7074	-.5426
	3.00	1.00	.0000	.4050	1.000	-1.0824	1.0824
		2.00	-3.1250*	.4050	.000	-4.2074	-2.0426
		4.00	-4.7500*	.4050	.000	-5.8324	-3.6676
	4.00	1.00	4.7500*	.4050	.000	3.6676	5.8324
		2.00	1.6250*	.4050	.001	.5426	2.7074
		3.00	4.7500*	.4050	.000	3.6676	5.8324

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 12. ANOVA on Livestock Ownership

		Sum of Squares	df	Mean Square	F	Sig.
COW	Between Groups	.219	3	7.292E-02	.699	.554
	Within Groups	16.275	156	.104		
	Total	16.494	159			NS
CARABAO	Between Groups	7.500E-02	3	2.500E-02	2.053	.109
	Within Groups	1.900	156	1.218E-02		
	Total	1.975	159			NS
HORSE	Between Groups	.000	3	.000	.	.
	Within Groups	.000	156	.000		
	Total	.000	159			
PIG	Between Groups	97.869	3	32.623	2.495	.062
	Within Groups	2039.575	156	13.074		
	Total	2137.444	159			NS
CHICKEN	Between Groups	341.670	3	113.890	4.562	.004
	Within Groups	3869.424	155	24.964		
	Total	4211.094	158			*sig.
GOAT	Between Groups	.424	3	.141	1.639	.183
	Within Groups	13.350	155	8.613E-02		
	Total	13.774	158			ns

APPENDIX TABLE 13. ANOVA on Other Productive Assets

		Sum of Squares	df	Mean Square	F	Sig.
Knapsack Sprayer	Between Groups	68.725	3	22.908	7.766	.000
	Within Groups	457.249	155	2.950		
	Total	525.975	158			*sig.
Jeep	Between Groups	1.350	3	.450	4.664	.004
	Within Groups	15.050	156	9.647E-02		
	Total	16.400	159			*sig.
Truck	Between Groups	.369	3	.123	1.413	.241
	Within Groups	13.575	156	8.702E-02		
	Total	13.944	159			ns

APPENDIX TABLE 13a. Multiple Comparisons on Other Productive Assets

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Knapsack Sprayer	1.00	2.00	-.8750	.3841	.144	-1.9014	.1514
		3.00	-1.5500*	.3841	.001	-2.5764	-.5236
		4.00	2.436E-02	.3865	1.000	-1.0086	1.0573
	2.00	1.00	.8750	.3841	.144	-.1514	1.9014
		3.00	-.6750	.3841	.485	-1.7014	.3514
		4.00	.8994	.3865	.128	-.1336	1.9323
	3.00	1.00	1.5500*	.3841	.001	.5236	2.5764
		2.00	.6750	.3841	.485	-.3514	1.7014
		4.00	1.5744*	.3865	.000	.5414	2.6073
	4.00	1.00	-2.4359E-02	.3865	1.000	-1.0573	1.0086
		2.00	-.8994	.3865	.128	-1.9323	.1336
		3.00	-1.5744*	.3865	.000	-2.6073	-.5414
Jeep	1.00	2.00	-.1500	6.945E-02	.194	-.3356	3.560E-02
		3.00	-.2250*	6.945E-02	.009	-.4106	-3.9399E-02
		4.00	-2.5000E-02	6.945E-02	1.000	-.2106	.1606
	2.00	1.00	.1500	6.945E-02	.194	-3.5601E-02	.3356
		3.00	-7.5000E-02	6.945E-02	1.000	-.2606	.1106
		4.00	.1250	6.945E-02	.443	-6.0601E-02	.3106
	3.00	1.00	.2250*	6.945E-02	.009	3.940E-02	.4106
		2.00	7.500E-02	6.945E-02	1.000	-.1106	.2606
		4.00	.2000*	6.945E-02	.027	1.440E-02	.3856
	4.00	1.00	2.500E-02	6.945E-02	1.000	-.1606	.2106
		2.00	-.1250	6.945E-02	.443	-.3106	6.060E-02
		3.00	-.2000*	6.945E-02	.027	-.3856	-1.4399E-02

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; Location 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 14. ANOVA on Source of Capital and Repayment

		Sum of Squares	df	Mean Square	F	Sig.
Capital Source	Between Groups	11.025	3	3.675	2.149	.096
	Within Groups	266.750	156	1.710		
	Total	277.775	159			
Repayment	Between Groups	3.169	3	1.056	.712	.546
	Within Groups	231.525	156	1.484		
	Total	234.694	159			

APPENDIX TABLE 15. ANOVA on Off-Farm Activities

		Sum of Squares	df	Mean Square	F	Sig.
Carpenter	Between Groups	1.319	3	.440	4.446	.005
	Within Groups	15.425	156	9.888E-02		
	Total	16.744	159			
Driver	Between Groups	.450	3	.150	1.677	.174
	Within Groups	13.950	156	8.942E-02		
	Total	14.400	159			
Baggage Man	Between Groups	3.225	3	1.075	7.121	.000
	Within Groups	23.550	156	.151		
	Total	26.775	159			
Store Keeper	Between Groups	.219	3	7.292E-02	1.375	.253
	Within Groups	8.275	156	5.304E-02		
	Total	8.494	159			
Market Vendor	Between Groups	.425	3	.142	2.469	.064
	Within Groups	8.950	156	5.737E-02		
	Total	9.375	159			
Remittance	Between Groups	.000	3	.000	.	.
	Within Groups	.000	156	.000		
	Total	.000	159			
Teacher	Between Groups	6.875E-02	3	2.292E-02	.749	.525
	Within Groups	4.775	156	3.061E-02		
	Total	4.844	159			
Others	Between Groups	70.875	3	23.625	2.717	.047
	Within Groups	1356.500	156	8.696		
	Total	1427.375	159			

APPENDIX TABLE 15a. Multiple Comparisons on Off-Farm Activities

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Carpenter	1.00	2.00	.0000	7.031E-02	1.000	-.1879	.1879
		3.00	2.500E-02	7.031E-02	1.000	-.1629	.2129
		4.00	-.2000*	7.031E-02	.030	-.3879	-1.2101E-02
	2.00	1.00	.0000	7.031E-02	1.000	-.1879	.1879
		3.00	2.500E-02	7.031E-02	1.000	-.1629	.2129
		4.00	-.2000*	7.031E-02	.030	-.3879	-1.2101E-02
	3.00	1.00	-2.5000E-02	7.031E-02	1.000	-.2129	.1629
		2.00	-2.5000E-02	7.031E-02	1.000	-.2129	.1629
		4.00	-.2250*	7.031E-02	.010	-.4129	-3.7101E-02
	4.00	1.00	.2000*	7.031E-02	.030	1.210E-02	.3879
		2.00	.2000*	7.031E-02	.030	1.210E-02	.3879
		3.00	.2250*	7.031E-02	.010	3.710E-02	.4129
Baggage Man	1.00	2.00	.3750*	8.688E-02	.000	.1428	.6072
		3.00	.2750*	8.688E-02	.011	4.283E-02	.5072
		4.00	.3000*	8.688E-02	.004	6.783E-02	.5322
	2.00	1.00	-.3750*	8.688E-02	.000	-.6072	-.1428
		3.00	-1.0000E-01	8.688E-02	1.000	-.3322	.1322
		4.00	-7.5000E-02	8.688E-02	1.000	-.3072	.1572
	3.00	1.00	-.2750*	8.688E-02	.011	-.5072	-4.2830E-02
		2.00	1.000E-01	8.688E-02	1.000	-.1322	.3322
		4.00	2.500E-02	8.688E-02	1.000	-.2072	.2572
	4.00	1.00	-.3000*	8.688E-02	.004	-.5322	-6.7830E-02
		2.00	7.500E-02	8.688E-02	1.000	-.1572	.3072
		3.00	-2.5000E-02	8.688E-02	1.000	-.2572	.2072

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 16. ANOVA on Upland Farming Systems

		Sum of Squares	df	Mean Square	F	Sig.
Vegetable Garden	Between Groups	7.500E-02	3	2.500E-02	2.053	.109
	Within Groups	1.900	156	1.218E-02		
	Total	1.975	159			ns
Rice Farming	Between Groups	6.875E-02	3	2.292E-02	1.243	.296
	Within Groups	2.875	156	1.843E-02		
	Total	2.944	159			ns
Intercropping	Between Groups	5.819	3	1.940	14.850	.000
	Within Groups	20.375	156	.131		
	Total	26.194	159			*sig.

APPENDIX TABLE 15a. Multiple Comparisons on Upland Farming System (Intercropping)

Dependent Variable: fsinteus

Bonferroni

(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.20000	.08081	.086	-.4160	.0160
	3.00	.02500	.08081	1.000	-.1910	.2410
	4.00	-.45000*	.08081	.000	-.6660	-.2340
2.00	1.00	.20000	.08081	.086	-.0160	.4160
	3.00	.22500*	.08081	.036	.0090	.4410
	4.00	-.25000*	.08081	.014	-.4660	-.0340
3.00	1.00	-.02500	.08081	1.000	-.2410	.1910
	2.00	-.22500*	.08081	.036	-.4410	-.0090
	4.00	-.47500*	.08081	.000	-.6910	-.2590
4.00	1.00	.45000*	.08081	.000	.2340	.6660
	2.00	.25000*	.08081	.014	.0340	.4660
	3.00	.47500*	.08081	.000	.2590	.6910

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4= Capinitan)

APPENDIX TABLE 16a. ANOVA on Soil and Water Conservation in Upland Farms

		Sum of Squares	df	Mean Square	F	Sig.
Terracing with Stone Walls	Between Groups	14.169	3	4.723	34.631	.000
	Within Groups	21.275	156	.136		
	Total	35.444	159			
Terracing with no Stone Walls	Between Groups	12.919	3	4.306	25.519	.000
	Within Groups	26.325	156	.169		
	Total	39.244	159			
Contour Farming with Hedgerows	Between Groups	5.950	3	1.983	15.746	.000
	Within Groups	19.650	156	.126		
	Total	25.600	159			
Contour Farming no Hedgerows	Between Groups	.400	3	.133	2.889	.037
	Within Groups	7.200	156	4.615E-02		
	Total	7.600	159			
Irrigation Canal	Between Groups	2.219	3	.740	5.705	.001
	Within Groups	20.225	156	.130		
	Total	22.444	159			

**APPENDIX TABLE 16a.a. Multiple Comparisons on Soil and Water Conservation in Upland Farms
Terracing with and Without Stone Walls)**

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Terracing With Stone Walls	1.00	2.00					
		3.00	.35000*	.08258	.000	.1293	.5707
		4.00	.80000*	.08258	.000	.5793	1.0207
	2.00	1.00	.17500	.08258	.214	-.0457	.3957
		3.00	-.35000*	.08258	.000	-.5707	-.1293
		4.00	.45000*	.08258	.000	.2293	.6707
	3.00	1.00	-.17500	.08258	.214	-.3957	.0457
		2.00	-.80000*	.08258	.000	-1.0207	-.5793
		4.00	-.45000*	.08258	.000	-.6707	-.2293
	4.00	1.00	-.62500*	.08258	.000	-.8457	-.4043
		2.00	-.17500	.08258	.214	-.3957	.0457
		3.00	.17500	.08258	.214	-.0457	.3957
Terracing Without Stone Walls	1.00	2.00	.62500*	.08258	.000	.4043	.8457
		3.00	-.45000*	.09186	.000	-.6955	-.2045
		4.00	-.80000*	.09186	.000	-1.0455	-.5545
	2.00	1.00	-.37500*	.09186	.000	-.6205	-.1295
		3.00	.45000*	.09186	.000	.2045	.6955
		4.00	-.35000*	.09186	.001	-.5955	-.1045
	3.00	1.00	.80000*	.09186	.000	.5545	1.0455
		2.00	.35000*	.09186	.001	.1045	.5955
		4.00	.42500*	.09186	.000	.1795	.6705
	4.00	1.00	.37500*	.09186	.000	.1295	.6205
		2.00	-.07500	.09186	1.000	-.3205	.1705
		3.00	-.42500*	.09186	.000	-.6705	-.1795

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan, Location 3=Lengaoan; Location 4=Capinitan)

Continuation of APPENDIX TABLE 16a.a. Multiple Comparisons on Soil and Water Conservation in Upland Farms

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Contour Farming With Hedgerows	1.00	2.00	.02500	.10412	1.000	-.2532	.3032
		3.00	.15000	.10412	.910	-.1282	.4282
		4.00	-.35000*	.10412	.006	-.6282	-.0718
	2.00	1.00	-.02500	.10412	1.000	-.3032	.2532
		3.00	.12500	.10412	1.000	-.1532	.4032
		4.00	-.37500*	.10412	.003	-.6532	-.0968
	3.00	1.00	-.15000	.10412	.910	-.4282	.1282
		2.00	-.12500	.10412	1.000	-.4032	.1532
		4.00	-.50000*	.10412	.000	-.7782	-.2218
	4.00	1.00	.35000*	.10412	.006	.0718	.6282
		2.00	.37500*	.10412	.003	.0968	.6532
		3.00	.50000*	.10412	.000	.2218	.7782
Contour Farming Without Hedgerows	1.00	2.00	-.10000	.04804	.234	-.2284	.0284
		3.00	.00000	.04804	1.000	-.1284	.1284
		4.00	-.10000	.04804	.234	-.2284	.0284
	2.00	1.00	.10000	.04804	.234	-.0284	.2284
		3.00	.10000	.04804	.234	-.0284	.2284
		4.00	.00000	.04804	1.000	-.1284	.1284
	3.00	1.00	.00000	.04804	1.000	-.1284	.1284
		2.00	-.10000	.04804	.234	-.2284	.0284
		4.00	-.10000	.04804	.234	-.2284	.0284
	4.00	1.00	.10000	.04804	.234	-.0284	.2284
		2.00	.00000	.04804	1.000	-.1284	.1284
		3.00	.10000	.04804	.234	-.0284	.2284
Irrigation Canal Establishment	1.00	2.00	-.15000	.08051	.386	-.3652	.0652
		3.00	-.10000	.08051	1.000	-.3152	.1152
		4.00	-.32500*	.08051	.001	-.5402	-.1098
	2.00	1.00	.15000	.08051	.386	-.0652	.3652
		3.00	.05000	.08051	1.000	-.1652	.2652
		4.00	-.17500	.08051	.187	-.3902	.0402
	3.00	1.00	.10000	.08051	1.000	-.1152	.3152
		2.00	-.05000	.08051	1.000	-.2652	.1652
		4.00	-.22500*	.08051	.035	-.4402	-.0098
	4.00	1.00	.32500*	.08051	.001	.1098	.5402
		2.00	.17500	.08051	.187	-.0402	.3902
		3.00	.22500*	.08051	.035	.0098	.4402

*. The mean difference is significant at the .05 level.

(Note: Location1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 16b. ANOVA on Soil and Water Conservation in Watershed/Forest Areas

		Sum of Squares	df	Mean Square	F	Sig.
Reforestation	Between Groups	12.450	3	4.150	33.285	.000
	Within Groups	19.450	156	.125		
	Total	31.900	159			
Fire Line Construction	Between Groups	9.769	3	3.256	36.349	.000
	Within Groups	13.975	156	.090		
	Total	23.744	159			

APPENDIX TABLE 16b.a. Multiple Comparisons on Soil and Water Conservation in Watershed/Forest Areas

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Reforestation	1.00	2.00	-.32500*	.07896	.000	-.5360	-.1140
		3.00	.00000	.07896	1.000	-.2110	.2110
		4.00	-.67500*	.07896	.000	-.8860	-.4640
	2.00	1.00	.32500*	.07896	.000	.1140	.5360
		3.00	.32500*	.07896	.000	.1140	.5360
		4.00	-.35000*	.07896	.000	-.5610	-.1390
	3.00	1.00	.00000	.07896	1.000	-.2110	.2110
		2.00	-.32500*	.07896	.000	-.5360	-.1140
		4.00	-.67500*	.07896	.000	-.8860	-.4640
	4.00	1.00	.67500*	.07896	.000	.4640	.8860
		2.00	.35000*	.07896	.000	.1390	.5610
		3.00	.67500*	.07896	.000	.4640	.8860
Fire Line Construction	1.00	2.00	-.12500	.06693	.382	-.3038	.0538
		3.00	.00000	.06693	1.000	-.1788	.1788
		4.00	-.60000*	.06693	.000	-.7788	-.4212
	2.00	1.00	.12500	.06693	.382	-.0538	.3038
		3.00	.12500	.06693	.382	-.0538	.3038
		4.00	-.47500*	.06693	.000	-.6538	-.2962
	3.00	1.00	.00000	.06693	1.000	-.1788	.1788
		2.00	-.12500	.06693	.382	-.3038	.0538
		4.00	-.60000*	.06693	.000	-.7788	-.4212
	4.00	1.00	.60000*	.06693	.000	.4212	.7788
		2.00	.47500*	.06693	.000	.2962	.6538
		3.00	.60000*	.06693	.000	.4212	.7788

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3= Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 17. ANOVA on Marketing of Products

		Sum of Squares	df	Mean Square	F	Sig.
Market Outlet	Between Groups	9.750	3	3.250	7.027	.000
	Within Groups	72.150	156	.462		
	Total	81.900	159			
Marketing Method	Between Groups	14.025	3	4.675	15.534	.000
	Within Groups	46.950	156	.301		
	Total	60.975	159			
Mode of Transport	Between Groups	1.850	3	.617	2.159	.095
	Within Groups	44.550	156	.286		
	Total	46.400	159			

APPENDIX TABLE 17a. Multiple Comparisons on Marketing of Products

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Market Outlet	1.00	2.00	-.5250*	.1521	.004	-.9314	-.1186
		3.00	-.6000*	.1521	.001	-1.0064	-.1936
		4.00	-.1750	.1521	1.000	-.5814	.2314
	2.00	1.00	.5250*	.1521	.004	.1186	.9314
		3.00	-7.5000E-02	.1521	1.000	-.4814	.3314
		4.00	.3500	.1521	.136	-5.6377E-02	.7564
	3.00	1.00	.6000*	.1521	.001	.1936	1.0064
		2.00	7.5000E-02	.1521	1.000	-.3314	.4814
		4.00	.4250*	.1521	.035	1.862E-02	.8314
	4.00	1.00	.1750	.1521	1.000	-.2314	.5814
		2.00	-.3500	.1521	.136	-.7564	5.638E-02
		3.00	-.4250*	.1521	.035	-.8314	-1.8623E-02
Marketing Method	1.00	2.00	.0000	.1227	1.000	-.3278	.3278
		3.00	-2.5000E-02	.1227	1.000	-.3528	.3028
		4.00	.6750*	.1227	.000	.3472	1.0028
	2.00	1.00	.0000	.1227	1.000	-.3278	.3278
		3.00	-2.5000E-02	.1227	1.000	-.3528	.3028
		4.00	.6750*	.1227	.000	.3472	1.0028
	3.00	1.00	2.5000E-02	.1227	1.000	-.3028	.3528
		2.00	2.5000E-02	.1227	1.000	-.3028	.3528
		4.00	.7000*	.1227	.000	.3722	1.0278
	4.00	1.00	-.6750*	.1227	.000	-1.0028	-.3472
		2.00	-.6750*	.1227	.000	-1.0028	-.3472
		3.00	-.7000*	.1227	.000	-1.0278	-.3722

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 18. ANOVA on Pricing of Products

PRICING

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	21.469	3	7.156	12.131	.000
Within Groups	92.025	156	.590		
Total	113.494	159			*sig.

APPENDIX TABLE 18a. Multiple Comparisons on Pricing of Products

Dependent Variable: PRICING

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.1000	.1717	1.000	-.5589	.3589
	3.00	-2.5000E-02	.1717	1.000	-.4839	.4339
	4.00	.8000*	.1717	.000	.3411	1.2589
2.00	1.00	.1000	.1717	1.000	-.3589	.5589
	3.00	7.5000E-02	.1717	1.000	-.3839	.5339
	4.00	.9000*	.1717	.000	.4411	1.3589
3.00	1.00	2.5000E-02	.1717	1.000	-.4339	.4839
	2.00	-7.5000E-02	.1717	1.000	-.5339	.3839
	4.00	.8250*	.1717	.000	.3661	1.2839
4.00	1.00	-.8000*	.1717	.000	-1.2589	-.3411
	2.00	-.9000*	.1717	.000	-1.3589	-.4411
	3.00	-.8250*	.1717	.000	-1.2839	-.3661

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 19. ANOVA on Type of Organizations Present in the Area

		Sum of Squares	df	Mean Square	F	Sig.
Dept. of Envi. and Natural Resources	Between Groups	21.225	3	7.075	44.957	.000
	Within Groups	24.550	156	.157		
	Total	45.775	159			
Dept. of Agriculture	Between Groups	11.450	3	3.817	21.151	.000
	Within Groups	28.150	156	.180		
	Total	39.600	159			
Dept. of Health	Between Groups	.419	3	.140	.777	.508
	Within Groups	28.025	156	.180		
	Total	28.444	159			
Bank	Between Groups	12.019	3	4.006	7.781	.000
	Within Groups	80.325	156	.515		
	Total	92.344	159			
Chemical Representat ives	Between Groups	77.319	3	25.773	21.036	.000
	Within Groups	191.125	156	1.225		
	Total	268.444	159			
Others	Between Groups	68.669	3	22.890	9.114	.000
	Within Groups	391.775	156	2.511		
	Total	460.444	159			

APPENDIX TABLE 19a. Multiple Comparisons on Type of Organizations Present in the Area (DENR)

Dependent Variable: denrtype

Bonferroni

(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.52500*	.08871	.000	-.7620	-.2880
	3.00	.07500	.08871	1.000	-.1620	.3120
	4.00	-.80000*	.08871	.000	-1.0370	-.5630
2.00	1.00	.52500*	.08871	.000	.2880	.7620
	3.00	.60000*	.08871	.000	.3630	.8370
	4.00	-.27500*	.08871	.014	-.5120	-.0380
3.00	1.00	-.07500	.08871	1.000	-.3120	.1620
	2.00	-.60000*	.08871	.000	-.8370	-.3630
	4.00	-.87500*	.08871	.000	-1.1120	-.6380
4.00	1.00	.80000*	.08871	.000	.5630	1.0370
	2.00	.27500*	.08871	.014	.0380	.5120
	3.00	.87500*	.08871	.000	.6380	1.1120

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

Continuation of APPENDIX TABLE 19a. Multiple Comparisons on Type of Organizations Present in the Area

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Department of Agriculture	1.00	2.00	-.10000	.09499	1.000	-.3538	.1538
		3.00	.32500*	.09499	.005	.0712	.5788
		4.00	-.42500*	.09499	.000	-.6788	-.1712
	2.00	1.00	.10000	.09499	1.000	-.1538	.3538
		3.00	.42500*	.09499	.000	.1712	.6788
		4.00	-.32500*	.09499	.005	-.5788	-.0712
	3.00	1.00	-.32500*	.09499	.005	-.5788	-.0712
		2.00	-.42500*	.09499	.000	-.6788	-.1712
		4.00	-.75000*	.09499	.000	-1.0038	-.4962
	4.00	1.00	.42500*	.09499	.000	.1712	.6788
		2.00	.32500*	.09499	.005	.0712	.5788
		3.00	.75000*	.09499	.000	.4962	1.0038
Department of Health	1.00	2.00	.00000	.09478	1.000	-.2533	.2533
		3.00	-.12500	.09478	1.000	-.3783	.1283
		4.00	-.05000	.09478	1.000	-.3033	.2033
	2.00	1.00	.00000	.09478	1.000	-.2533	.2533
		3.00	-.12500	.09478	1.000	-.3783	.1283
		4.00	-.05000	.09478	1.000	-.3033	.2033
	3.00	1.00	.12500	.09478	1.000	-.1283	.3783
		2.00	.12500	.09478	1.000	-.1283	.3783
		4.00	.07500	.09478	1.000	-.1783	.3283
	4.00	1.00	.05000	.09478	1.000	-.2033	.3033
		2.00	.05000	.09478	1.000	-.2033	.3033
		3.00	-.07500	.09478	1.000	-.3283	.1783
Bank	1.00	2.00	-.47500*	.16045	.021	-.9038	-.0462
		3.00	-.62500*	.16045	.001	-1.0538	-.1962
		4.00	-.02500	.16045	1.000	-.4538	.4038
	2.00	1.00	.47500*	.16045	.021	.0462	.9038
		3.00	-.15000	.16045	1.000	-.5788	.2788
		4.00	.45000*	.16045	.034	.0212	.8788
	3.00	1.00	.62500*	.16045	.001	.1962	1.0538
		2.00	.15000	.16045	1.000	-.2788	.5788
		4.00	.60000*	.16045	.002	.1712	1.0288
	4.00	1.00	.02500	.16045	1.000	-.4038	.4538
		2.00	-.45000*	.16045	.034	-.8788	-.0212
		3.00	-.60000*	.16045	.002	-1.0288	-.1712

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

Continuation of APPENDIX TABLE 19a. Multiple Comparisons on Type of Organizations Present in the Area

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Chemical Company Representatives	1.00	2.00	1.45000*	.24750	.000	.7886	2.1114
		3.00	.12500	.24750	1.000	-.5364	.7864
		4.00	1.45000*	.24750	.000	.7886	2.1114
	2.00	1.00	-1.45000*	.24750	.000	-2.1114	-.7886
		3.00	-1.32500*	.24750	.000	-1.9864	-.6636
		4.00	.00000	.24750	1.000	-.6614	.6614
	3.00	1.00	-.12500	.24750	1.000	-.7864	.5364
		2.00	1.32500*	.24750	.000	.6636	1.9864
		4.00	1.32500*	.24750	.000	.6636	1.9864
	4.00	1.00	-1.45000*	.24750	.000	-2.1114	-.7886
		2.00	.00000	.24750	1.000	-.6614	.6614
		3.00	-1.32500*	.24750	.000	-1.9864	-.6636
Others	1.00	2.00	-1.80000*	.35436	.000	-2.7470	-.8530
		3.00	-.55000	.35436	.736	-1.4970	.3970
		4.00	-.92500	.35436	.060	-1.8720	.0220
	2.00	1.00	1.80000*	.35436	.000	.8530	2.7470
		3.00	1.25000*	.35436	.003	.3030	2.1970
		4.00	.87500	.35436	.088	-.0720	1.8220
	3.00	1.00	.55000	.35436	.736	-.3970	1.4970
		2.00	-1.25000*	.35436	.003	-2.1970	-.3030
		4.00	-.37500	.35436	1.000	-1.3220	.5720
	4.00	1.00	.92500	.35436	.060	-.0220	1.8720
		2.00	-.87500	.35436	.088	-1.8220	.0720
		3.00	.37500	.35436	1.000	-.5720	1.3220

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 19b. ANOVA on Membership and Participation in Organizations

		Sum of Squares	df	Mean Square	F	Sig.
Participation	Between Groups	21.619	3	7.206	12.157	.000
	Within Groups	92.475	156	.593		*sig
	Total	114.094	159			
Reason for Joining	Between Groups	196.069	3	65.356	18.781	.000
	Within Groups	542.875	156	3.480		*sig
	Total	738.944	159			

APPENDIX TABLE 19b.a. Multiple Comparisons on Membership and Participation in Organizations

Bonferroni

Dependent Variable	(I) loc	(J) loc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Participation	1.00	2.00	-.80000*	.17216	.000	-1.2601	-.3399
		3.00	-.60000*	.17216	.004	-1.0601	-.1399
		4.00	-.97500*	.17216	.000	-1.4351	-.5149
	2.00	1.00	.80000*	.17216	.000	.3399	1.2601
		3.00	.20000	.17216	1.000	-.2601	.6601
		4.00	-.17500	.17216	1.000	-.6351	.2851
	3.00	1.00	.60000*	.17216	.004	.1399	1.0601
		2.00	-.20000	.17216	1.000	-.6601	.2601
		4.00	-.37500	.17216	.185	-.8351	.0851
	4.00	1.00	.97500*	.17216	.000	.5149	1.4351
		2.00	.17500	.17216	1.000	-.2851	.6351
		3.00	.37500	.17216	.185	-.0851	.8351
Reason for Joining Organizations	1.00	2.00	-2.60000*	.41713	.000	-3.7147	-1.4853
		3.00	-2.10000*	.41713	.000	-3.2147	-.9853
		4.00	-2.77500*	.41713	.000	-3.8897	-1.6603
	2.00	1.00	2.60000*	.41713	.000	1.4853	3.7147
		3.00	.50000	.41713	1.000	-.6147	1.6147
		4.00	-.17500	.41713	1.000	-1.2897	.9397
	3.00	1.00	2.10000*	.41713	.000	.9853	3.2147
		2.00	-.50000	.41713	1.000	-1.6147	.6147
		4.00	-.67500	.41713	.646	-1.7897	.4397
	4.00	1.00	2.77500*	.41713	.000	1.6603	3.8897
		2.00	.17500	.41713	1.000	-.9397	1.2897
		3.00	.67500	.41713	.646	-.4397	1.7897

*. The mean difference is significant at the .05 level.

(Note: Location 1=Lesseb; Location 2=Boyacaoan; Location 3=Lengaoan; Location 4=Capinitan)

APPENDIX TABLE 20. ANOVA on Main Use of Watershed Resources

		Sum of Squares	df	Mean Square	F	Sig.
Forest	Between Groups	144.019	3	48.006	12.237	.000
	Within Groups	611.975	156	3.923		
	Total	755.994	159			
Water	Between Groups	168.969	3	56.323	6.636	.000
	Within Groups	1324.125	156	8.488		
	Total	1493.094	159			
Forest products	Between Groups	34.500	3	11.500	4.138	.007
	Within Groups	433.500	156	2.779		
	Total	468.000	159			
Grassland	Between Groups	95.119	3	31.706	18.534	.000
	Within Groups	266.875	156	1.711		
	Total	361.994	159			

APPENDIX TABLE 20a. Multiple Comparisons on the Main Use of Watershed Resources

Dependent Variable: FORESTMU

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.7500	.4429	.554	-1.9335	.4335
	3.00	.5250	.4429	1.000	-.6585	1.7085
	4.00	-2.0000*	.4429	.000	-3.1835	-.8165
2.00	1.00	.7500	.4429	.554	-.4335	1.9335
	3.00	1.2750*	.4429	.027	9.147E-02	2.4585
	4.00	-1.2500*	.4429	.032	-2.4335	-6.6473E-02
3.00	1.00	-.5250	.4429	1.000	-1.7085	.6585
	2.00	-1.2750*	.4429	.027	-2.4585	-9.1473E-02
	4.00	-2.5250*	.4429	.000	-3.7085	-1.3415
4.00	1.00	2.0000*	.4429	.000	.8165	3.1835
	2.00	1.2500*	.4429	.032	6.647E-02	2.4335
	3.00	2.5250*	.4429	.000	1.3415	3.7085

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capitan)

Continuation of APPENDIX TABLE 20a. Multiple Comparisons Main Use of Watershed Resources

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Water	1.00	2.00	.3500	.6515	1.000	-1.3909	2.0909
		3.00	2.4250*	.6515	.002	.6841	4.1659
		4.00	-.1000	.6515	1.000	-1.8409	1.6409
	2.00	1.00	-.3500	.6515	1.000	-2.0909	1.3909
		3.00	2.0750*	.6515	.010	.3341	3.8159
		4.00	-.4500	.6515	1.000	-2.1909	1.2909
	3.00	1.00	-2.4250*	.6515	.002	-4.1659	-.6841
		2.00	-2.0750*	.6515	.010	-3.8159	-.3341
		4.00	-2.5250*	.6515	.001	-4.2659	-.7841
	4.00	1.00	.1000	.6515	1.000	-1.6409	1.8409
		2.00	.4500	.6515	1.000	-1.2909	2.1909
		3.00	2.5250*	.6515	.001	.7841	4.2659
Forest products	1.00	2.00	-.4000	.3727	1.000	-1.3961	.5961
		3.00	.1500	.3727	1.000	-.8461	1.1461
		4.00	-1.0500*	.3727	.033	-2.0461	-5.3894E-02
	2.00	1.00	.4000	.3727	1.000	-.5961	1.3961
		3.00	.5500	.3727	.853	-.4461	1.5461
		4.00	-.6500	.3727	.499	-1.6461	.3461
	3.00	1.00	-.1500	.3727	1.000	-1.1461	.8461
		2.00	-.5500	.3727	.853	-1.5461	.4461
		4.00	-1.2000*	.3727	.009	-2.1961	-.2039
	4.00	1.00	1.0500*	.3727	.033	5.389E-02	2.0461
		2.00	.6500	.3727	.499	-.3461	1.6461
		3.00	1.2000*	.3727	.009	.2039	2.1961
Grassland	1.00	2.00	-.1500	.2925	1.000	-.9316	.6316
		3.00	.0000	.2925	1.000	-.7816	.7816
		4.00	-1.8250*	.2925	.000	-2.6066	-1.0434
	2.00	1.00	.1500	.2925	1.000	-.6316	.9316
		3.00	.1500	.2925	1.000	-.6316	.9316
		4.00	-1.6750*	.2925	.000	-2.4566	-.8934
	3.00	1.00	.0000	.2925	1.000	-.7816	.7816
		2.00	-.1500	.2925	1.000	-.9316	.6316
		4.00	-1.8250*	.2925	.000	-2.6066	-1.0434
	4.00	1.00	1.8250*	.2925	.000	1.0434	2.6066
		2.00	1.6750*	.2925	.000	.8934	2.4566
		3.00	1.8250*	.2925	.000	1.0434	2.6066

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 21. ANOVA on the Role and Importance of the Watershed Resources

		Sum of Squares	df	Mean Square	F	Sig.
Forest Role	Between Groups	49.650	3	16.550	12.022	.000
	Within Groups	214.750	156	1.377		
	Total	264.400	159			
Water Role	Between Groups	16.325	3	5.442	3.114	.028
	Within Groups	272.650	156	1.748		
	Total	288.975	159			
Forest Products Role	Between Groups	29.569	3	9.856	9.049	.000
	Within Groups	169.925	156	1.089		
	Total	199.494	159			
Grassland Role	Between Groups	8.275	3	2.758	11.475	.000
	Within Groups	37.500	156	.240		
	Total	45.775	159			
Forest Importance	Between Groups	40.900	3	13.633	21.057	.000
	Within Groups	101.000	156	.647		
	Total	141.900	159			
Water Importance	Between Groups	7.719	3	2.573	7.797	.000
	Within Groups	51.475	156	.330		
	Total	59.194	159			
Forest Products Importance	Between Groups	14.150	3	4.717	9.320	.000
	Within Groups	78.950	156	.506		
	Total	93.100	159			
Grassland Importance	Between Groups	13.600	3	4.533	16.838	.000
	Within Groups	42.000	156	.269		
	Total	55.600	159			

APPENDIX TABLE 21a. Multiple Comparisons on The Role and Importance of Watershed Resources

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Forest Role	1.00	2.00	-.5250	.2624	.283	-1.2261	.1761
		3.00	.6000	.2624	.141	-.1011	1.3011
		4.00	-.8750*	.2624	.006	-1.5761	-.1739
	2.00	1.00	.5250	.2624	.283	-.1761	1.2261
		3.00	1.1250*	.2624	.000	.4239	1.8261
		4.00	-.3500	.2624	1.000	-1.0511	.3511
	3.00	1.00	-.6000	.2624	.141	-1.3011	.1011
		2.00	-1.1250*	.2624	.000	-1.8261	-.4239
		4.00	-1.4750*	.2624	.000	-2.1761	-.7739
	4.00	1.00	.8750*	.2624	.006	.1739	1.5761
		2.00	.3500	.2624	1.000	-.3511	1.0511
		3.00	1.4750*	.2624	.000	.7739	2.1761
Water Role	1.00	2.00	-.3250	.2956	1.000	-1.1150	.4650
		3.00	.5500	.2956	.388	-.2400	1.3400
		4.00	-7.5000E-02	.2956	1.000	-.8650	.7150
	2.00	1.00	.3250	.2956	1.000	-.4650	1.1150
		3.00	.8750*	.2956	.021	8.502E-02	1.6650
		4.00	.2500	.2956	1.000	-.5400	1.0400
	3.00	1.00	-.5500	.2956	.388	-1.3400	.2400
		2.00	-.8750*	.2956	.021	-1.6650	-8.5024E-02
		4.00	-.6250	.2956	.217	-1.4150	.1650
	4.00	1.00	7.500E-02	.2956	1.000	-.7150	.8650
		2.00	-.2500	.2956	1.000	-1.0400	.5400
		3.00	.6250	.2956	.217	-.1650	1.4150
Forest Products Role	1.00	2.00	-.2750	.2334	1.000	-.8986	.3486
		3.00	.0000	.2334	1.000	-.6236	.6236
		4.00	-1.0500*	.2334	.000	-1.6736	-.4264
	2.00	1.00	.2750	.2334	1.000	-.3486	.8986
		3.00	.2750	.2334	1.000	-.3486	.8986
		4.00	-.7750*	.2334	.007	-1.3986	-.1514
	3.00	1.00	.0000	.2334	1.000	-.6236	.6236
		2.00	-.2750	.2334	1.000	-.8986	.3486
		4.00	-1.0500*	.2334	.000	-1.6736	-.4264
	4.00	1.00	1.0500*	.2334	.000	.4264	1.6736
		2.00	.7750*	.2334	.007	.1514	1.3986
		3.00	1.0500*	.2334	.000	.4264	1.6736

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

Continuation of APPENDIX TABLE 21a. Multiple Comparisons on the Role and Importance of Watershed Resources

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Grass Role	1.00	2.00	-.1000	.1096	1.000	-.3930	.1930
		3.00	.0000	.1096	1.000	-.2930	.2930
		4.00	-.5500*	.1096	.000	-.8430	-.2570
	2.00	1.00	.1000	.1096	1.000	-.1930	.3930
		3.00	.1000	.1096	1.000	-.1930	.3930
		4.00	-.4500*	.1096	.000	-.7430	-.1570
	3.00	1.00	.0000	.1096	1.000	-.2930	.2930
		2.00	-.1000	.1096	1.000	-.3930	.1930
		4.00	-.5500*	.1096	.000	-.8430	-.2570
	4.00	1.00	.5500*	.1096	.000	.2570	.8430
		2.00	.4500*	.1096	.000	.1570	.7430
		3.00	.5500*	.1096	.000	.2570	.8430
Forest Importance	1.00	2.00	-.2000	.1799	1.000	-.6808	.2808
		3.00	.7500*	.1799	.000	.2692	1.2308
		4.00	-.6500*	.1799	.002	-1.1308	-.1692
	2.00	1.00	.2000	.1799	1.000	-.2808	.6808
		3.00	.9500*	.1799	.000	.4692	1.4308
		4.00	-.4500	.1799	.080	-.9308	3.081E-02
	3.00	1.00	-.7500*	.1799	.000	-1.2308	-.2692
		2.00	-.9500*	.1799	.000	-1.4308	-.4692
		4.00	-1.4000*	.1799	.000	-1.8808	-.9192
	4.00	1.00	.6500*	.1799	.002	.1692	1.1308
		2.00	.4500	.1799	.080	-3.0808E-02	.9308
		3.00	1.4000*	.1799	.000	.9192	1.8808
Water Importance	1.00	2.00	2.500E-02	.1284	1.000	-.3182	.3682
		3.00	.5500*	.1284	.000	.2068	.8932
		4.00	.2000	.1284	.729	-.1432	.5432
	2.00	1.00	-2.5000E-02	.1284	1.000	-.3682	.3182
		3.00	.5250*	.1284	.000	.1818	.8682
		4.00	.1750	.1284	1.000	-.1682	.5182
	3.00	1.00	-.5500*	.1284	.000	-.8932	-.2068
		2.00	-.5250*	.1284	.000	-.8682	-.1818
		4.00	-.3500*	.1284	.043	-.6932	-6.7509E-03
	4.00	1.00	-.2000	.1284	.729	-.5432	.1432
		2.00	-.1750	.1284	1.000	-.5182	.1682
		3.00	.3500*	.1284	.043	6.751E-03	.6932

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

Continuation of APPENDIX TABLE 21a. Multiple Comparisons on the Role and Importance of Watershed Resources

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Grass Role	1.00	2.00	-.1000	.1096	1.000	-.3930	.1930
		3.00	.0000	.1096	1.000	-.2930	.2930
		4.00	-.5500*	.1096	.000	-.8430	-.2570
	2.00	1.00	.1000	.1096	1.000	-.1930	.3930
		3.00	.1000	.1096	1.000	-.1930	.3930
		4.00	-.4500*	.1096	.000	-.7430	-.1570
	3.00	1.00	.0000	.1096	1.000	-.2930	.2930
		2.00	-.1000	.1096	1.000	-.3930	.1930
		4.00	-.5500*	.1096	.000	-.8430	-.2570
	4.00	1.00	.5500*	.1096	.000	.2570	.8430
		2.00	.4500*	.1096	.000	.1570	.7430
		3.00	.5500*	.1096	.000	.2570	.8430
Forest Importance	1.00	2.00	-.2000	.1799	1.000	-.6808	.2808
		3.00	.7500*	.1799	.000	.2692	1.2308
		4.00	-.6500*	.1799	.002	-1.1308	-.1692
	2.00	1.00	.2000	.1799	1.000	-.2808	.6808
		3.00	.9500*	.1799	.000	.4692	1.4308
		4.00	-.4500	.1799	.080	-.9308	3.081E-02
	3.00	1.00	-.7500*	.1799	.000	-1.2308	-.2692
		2.00	-.9500*	.1799	.000	-1.4308	-.4692
		4.00	-1.4000*	.1799	.000	-1.8808	-.9192
	4.00	1.00	.6500*	.1799	.002	.1692	1.1308
		2.00	.4500	.1799	.080	-3.0808E-02	.9308
		3.00	1.4000*	.1799	.000	.9192	1.8808
Water Importance	1.00	2.00	2.500E-02	.1284	1.000	-.3182	.3682
		3.00	.5500*	.1284	.000	.2068	.8932
		4.00	.2000	.1284	.729	-.1432	.5432
	2.00	1.00	-2.5000E-02	.1284	1.000	-.3682	.3182
		3.00	.5250*	.1284	.000	.1818	.8682
		4.00	.1750	.1284	1.000	-.1682	.5182
	3.00	1.00	-.5500*	.1284	.000	-.8932	-.2068
		2.00	-.5250*	.1284	.000	-.8682	-.1818
		4.00	-.3500*	.1284	.043	-.6932	-6.7509E-03
	4.00	1.00	-.2000	.1284	.729	-.5432	.1432
		2.00	-.1750	.1284	1.000	-.5182	.1682
		3.00	.3500*	.1284	.043	6.751E-03	.6932

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

Continuation of APPENDIX TABLE 21a. Multiple Comparisons on the Role and Importance of Watershed Resources

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Forest Products Importance	1.00	2.00					
		3.00	-.4000	.1591	.078	-.8251	2.510E-02
		4.00	-.1250	.1591	1.000	-.5501	.3001
	2.00	1.00	-.7750*	.1591	.000	-1.2001	-.3499
		3.00	.4000	.1591	.078	-2.5096E-02	.8251
		4.00	.2750	.1591	.515	-.1501	.7001
	3.00	1.00	-.3750	.1591	.118	-.8001	5.010E-02
		2.00	.1250	.1591	1.000	-.3001	.5501
		4.00	-.2750	.1591	.515	-.7001	.1501
	4.00	1.00	-.6500*	.1591	.000	-1.0751	-.2249
		2.00	.7750*	.1591	.000	.3499	1.2001
		3.00	.3750	.1591	.118	-5.0096E-02	.8001
Grassland Importance	1.00	2.00	.6500*	.1591	.000	.2249	1.0751
		3.00	-.1000	.1160	1.000	-.4101	.2101
		4.00	.0000	.1160	1.000	-.3101	.3101
	2.00	1.00	-.7000*	.1160	.000	-1.0101	-.3899
		3.00	.1000	.1160	1.000	-.2101	.4101
		4.00	.1000	.1160	1.000	-.2101	.4101
	3.00	1.00	-.6000*	.1160	.000	-.9101	-.2999
		2.00	-.1000	.1160	1.000	-.4101	.2101
		4.00	-.7000*	.1160	.000	-1.0101	-.3899
	4.00	1.00	.7000*	.1160	.000	.3899	1.0101
		2.00	.6000*	.1160	.000	.2899	.9101
		3.00	.7000*	.1160	.000	.3899	1.0101

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 22. ANOVA on Coping Strategies

		Sum of Squares	df	Mean Square	F	Sig.
Borrow from Bank	Between Groups	8.269	3	2.756	.949	.419
	Within Groups	453.225	156	2.905		
	Total	461.494	159			
Employment in the Community	Between Groups	3.219	3	1.073	1.027	.383
	Within Groups	163.025	156	1.045		
	Total	166.244	159			
Employment Outside Community	Between Groups	1.550	3	.517	.373	.772
	Within Groups	215.950	156	1.384		
	Total	217.500	159			
Borrow from Relatives	Between Groups	19.169	3	6.390	1.004	.393
	Within Groups	992.575	156	6.363		
	Total	1011.744	159			

APPENDIX TABLE 23. ANOVA on Food Sufficiency

FOODSECU

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.969	3	.323	5.431	.001
Within Groups	9.275	156	5.946E-02		
Total	10.244	159			*sig.

APPENDIX TABLE 23a. Multiple Comparisons on Food Security

Dependent Variable: FOODSECU

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.1750*	5.452E-02	.010	-.3207	-2.9297E-02
	3.00	-2.5000E-02	5.452E-02	1.000	-.1707	.1207
	4.00	2.500E-02	5.452E-02	1.000	-.1207	.1707
2.00	1.00	.1750*	5.452E-02	.010	2.930E-02	.3207
	3.00	.1500*	5.452E-02	.040	4.297E-03	.2957
	4.00	.2000*	5.452E-02	.002	5.430E-02	.3457
3.00	1.00	2.500E-02	5.452E-02	1.000	-.1207	.1707
	2.00	-.1500*	5.452E-02	.040	-.2957	-4.2971E-03
	4.00	5.000E-02	5.452E-02	1.000	-9.5703E-02	.1957
4.00	1.00	-2.5000E-02	5.452E-02	1.000	-.1707	.1207
	2.00	-.2000*	5.452E-02	.002	-.3457	-5.4297E-02
	3.00	-5.0000E-02	5.452E-02	1.000	-.1957	9.570E-02

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX TABLE 25. ANOVA on Risks and Problems Encountered

		Sum of Squares	df	Mean Square	F	Sig.
Pests and Diseases	Between Groups	8.119	3	2.706	1.158	.328
	Within Groups	364.725	156	2.338		
	Total	372.844	159			
Occurrence of Typhoon	Between Groups	2.250	3	.750	.272	.846
	Within Groups	430.150	156	2.757		
	Total	432.400	159			
Lack of Irrigation Water	Between Groups	61.269	3	20.423	6.710	.000
	Within Groups	474.825	156	3.044		
	Total	536.094	159			
Lack of Capital	Between Groups	11.869	3	3.956	2.276	.082
	Within Groups	271.125	156	1.738		
	Total	282.994	159			
Lack of Labour	Between Groups	11.350	3	3.783	2.169	.094
	Within Groups	272.150	156	1.745		
	Total	283.500	159			
Low Price of Products	Between Groups	21.725	3	7.242	2.955	.034
	Within Groups	382.250	156	2.450		
	Total	403.975	159			

APPENDIX TABLE 25a. Multiple Comparisons on the Risks and Problems Encountered

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Lack of Irrigation water	1.00	2.00	.5000	.3901	1.000	-.5425	1.5425
		3.00	1.6250*	.3901	.000	.5825	2.6675
		4.00	1.1500*	.3901	.022	.1075	2.1925
	2.00	1.00	-.5000	.3901	1.000	-1.5425	.5425
		3.00	1.1250*	.3901	.027	8.250E-02	2.1675
		4.00	.6500	.3901	.586	-.3925	1.6925
	3.00	1.00	-1.6250*	.3901	.000	-2.6675	-.5825
		2.00	-1.1250*	.3901	.027	-2.1675	-8.2495E-02
		4.00	-.4750	.3901	1.000	-1.5175	.5675
	4.00	1.00	-1.1500*	.3901	.022	-2.1925	-.1075
		2.00	-.6500	.3901	.586	-1.6925	.3925
		3.00	.4750	.3901	1.000	-.5675	1.5175
Low Price of Products	1.00	2.00	.4750	.3500	1.000	-.4604	1.4104
		3.00	-.4750	.3500	1.000	-1.4104	.4604
		4.00	-.3500	.3500	1.000	-1.2854	.5854
	2.00	1.00	-.4750	.3500	1.000	-1.4104	.4604
		3.00	-.9500*	.3500	.044	-1.8854	-1.4627E-02
		4.00	-.8250	.3500	.118	-1.7604	.1104
	3.00	1.00	.4750	.3500	1.000	-.4604	1.4104
		2.00	.9500*	.3500	.044	1.463E-02	1.8854
		4.00	.1250	.3500	1.000	-.8104	1.0604
	4.00	1.00	.3500	.3500	1.000	-.5854	1.2854
		2.00	.8250	.3500	.118	-.1104	1.7604
		3.00	-.1250	.3500	1.000	-1.0604	.8104

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaosan; 3=Lengaoan; 4=Capinitan)

IDIX TABLE 26. ANOVA on the Perception on the Change in Land Use for the past 20 Years

		Sum of Squares	df	Mean Square	F	Sig.
Upland Farms	Between Groups	20.050	3	6.683	14.175	.000
	Within Groups	73.550	156	.471		
	Total	93.600	159			
Forest Areas	Between Groups	78.219	3	26.073	30.179	.000
	Within Groups	134.775	156	.864		
	Total	212.994	159			
Water	Between Groups	35.625	3	11.875	17.129	.000
	Within Groups	108.150	156	.693		
	Total	143.775	159			
Grassland Areas	Between Groups	40.619	3	13.540	12.186	.000
	Within Groups	173.325	156	1.111		
	Total	213.944	159			

APPENDIX TABLE 26a. Multiple Comparisons on the Perception in Land Use Changes for the Past 20 Years

Dependent Variable: UPFARMSC

Bonferroni

(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-.6250*	.1535	.000	-1.0353	-.2147
	3.00	-.6250*	.1535	.000	-1.0353	-.2147
	4.00	.1500	.1535	1.000	-.2603	.5603
2.00	1.00	.6250*	.1535	.000	.2147	1.0353
	3.00	.0000	.1535	1.000	-.4103	.4103
	4.00	.7750*	.1535	.000	.3647	1.1853
3.00	1.00	.6250*	.1535	.000	.2147	1.0353
	2.00	.0000	.1535	1.000	-.4103	.4103
	4.00	.7750*	.1535	.000	.3647	1.1853
4.00	1.00	-.1500	.1535	1.000	-.5603	.2603
	2.00	-.7750*	.1535	.000	-1.1853	-.3647
	3.00	-.7750*	.1535	.000	-1.1853	-.3647

*. The mean difference is significant at the .05 level.

Continuation of APPENDIX TABLE 26a. Multiple Comparisons on the Perception of Land Use Changes for the Past 20 Years

Bonferroni

Dependent Variable	(I) LOC	(J) LOC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Forest Areas	1.00	2.00	.2000	.2078	1.000	-.3554	.7554
		3.00	-.5750*	.2078	.038	-1.1304	-1.9587E-02
		4.00	1.3500*	.2078	.000	.7946	1.9054
	2.00	1.00	-.2000	.2078	1.000	-.7554	.3554
		3.00	-.7750*	.2078	.002	-1.3304	-.2196
		4.00	1.1500*	.2078	.000	.5946	1.7054
	3.00	1.00	.5750*	.2078	.038	1.959E-02	1.1304
		2.00	.7750*	.2078	.002	.2196	1.3304
		4.00	1.9250*	.2078	.000	1.3696	2.4804
	4.00	1.00	-1.3500*	.2078	.000	-1.9054	-.7946
		2.00	-1.1500*	.2078	.000	-1.7054	-.5946
		3.00	-1.9250*	.2078	.000	-2.4804	-1.3696
Water	1.00	2.00	7.500E-02	.1862	1.000	-.4225	.5725
		3.00	-.5250*	.1862	.033	-1.0225	-2.7464E-02
		4.00	.8000*	.1862	.000	.3025	1.2975
	2.00	1.00	-7.5000E-02	.1862	1.000	-.5725	.4225
		3.00	-.6000*	.1862	.009	-1.0975	-.1025
		4.00	.7250*	.1862	.001	.2275	1.2225
	3.00	1.00	.5250*	.1862	.033	2.746E-02	1.0225
		2.00	.6000*	.1862	.009	.1025	1.0975
		4.00	1.3250*	.1862	.000	.8275	1.8225
	4.00	1.00	-.8000*	.1862	.000	-1.2975	-.3025
		2.00	-.7250*	.1862	.001	-1.2225	-.2275
		3.00	-1.3250*	.1862	.000	-1.8225	-.8275
Grassland	1.00	2.00	2.500E-02	.2357	1.000	-.6049	.6549
		3.00	-.5000	.2357	.213	-1.1299	.1299
		4.00	.9000*	.2357	.001	.2701	1.5299
	2.00	1.00	-2.5000E-02	.2357	1.000	-.6549	.6049
		3.00	-.5250	.2357	.164	-1.1549	.1049
		4.00	.8750*	.2357	.002	.2451	1.5049
	3.00	1.00	.5000	.2357	.213	-.1299	1.1299
		2.00	.5250	.2357	.164	-.1049	1.1549
		4.00	1.4000*	.2357	.000	.7701	2.0299
	4.00	1.00	-.9000*	.2357	.001	-1.5299	-.2701
		2.00	-.8750*	.2357	.002	-1.5049	-.2451
		3.00	-1.4000*	.2357	.000	-2.0299	-.7701

*. The mean difference is significant at the .05 level.

(NOTE: Location 1=Lesseb; 2=Boyacaoan; 3=Lengaoan; 4=Capinitan)

APPENDIX C. Monthly Average Wholesale Price (Pesos per Kg) of Selected Highland Vegetables (January 2002 – December 2002)

Crops	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beans	9	11	26	15.6	17	9	19	20	12	8	11..5	11..5
Cabbage	5	7	10	5.5	11	12	13	16	13	17	8.4	5.6
Carrots	12	10	10	10	13	15	26	17	7	11	7.8	8.5
Chayote	3	4	4	5	4	3.5	5	7	1	3	4	2
Chinese Cabbage	4	5	7	6.5	11	12	13	7	6	3	3.6	4.5
Potato	16	14	14	14	17	14	14	12	12	12	10	10..5
Broccoli	13	16	13	11	13	16	56	48	28	22	24	30
Lettuce	7	29	16	34	34	32	35	60	10	11	30	35
Cauliflower	7	15	10	8	7	13	31	43	33	28	37	50

Source: Agribusiness Section, Department of Agriculture, Cordillera Highland Agriculture Resource Management Program

Wholesale Price of Selected Vegetables (Pesos per Kg) Based on La Trinidad Trading Post

Crops	March - June 2002 (summer)	July – November 2002 (Rainy)	Average
Bell Pepper	25	15	20
Celery	80	35	57..50
Sweet Peas	15	40	27..50
Sweet Potato	2.50	2.50	2.50

APPENDIX D. Derived Regression Equation Models

1. Yield of Crops Per Hectare

$$Y = 0.977 + (1.933E-07) t1 + (1.368E-07) t2 + (7.648E-08) t3 + (8.325E-07) t4 + (9.412E-08) t5 + (3.485E-06) t6 + (-9.18E08) t7 + (6.132E-07) t8 + (2.420E-06) t9 + (5.630E-07) t10 \text{ (Not Significant)}$$

2. Gross Income Per Hectare

$$Y = 0.977 + (1.879E-08) t1 + (1.029E-08) t2 + (6.316E-09) t3 + (5.891E-08) t4 + (1.368E-08) t5 + (1.267E-07) t6 + (-3.67E-08) t7 + (3.066E-08) t8 + (8.72E-08) t9 + ((9.791E-09) t10 \text{ (Not Significant)}$$

3. Pricing and Marketing of Crops

$$Y = 0.600 + (5.359E-02) t1 + (2.799E-02) t2 + (7.589E-02) t3 + (2.049E-02) t4 \text{ (Significant)}$$

4. Terracing With Stone Walls

$$Y = -1.8E-16 + (0.107) t1 + (0.19) t2 + (8.024E-03) t3 + (0.315) t4 + (0.206) t5 \text{ (Significant)}$$

5. Terracing With No Stone Walls

$$Y = 0.122 + (-0.103) t1 + (0.142) t2 + (5.632E-02) t3 + (0.17) t4 + (0.453) t5 \text{ (Significant)}$$

6. Acceptability of Upland Vegetable Farming

$$Y = 0.686 + (8.1E-02) t1 + (2.337E02) t2 + (7.763E-02) t3 + (2.097E-02) t4 \text{ (Not Significant)}$$

7. Opinions of Organizations Present in Communities

$$Y = 0.961 + (-4.76E-03) t1 + (1.244E-02) t2 + (3.167E-03) t3 + (1.008E-02) t4 + (8.039E-03) t5 + (1.268E-02) t6 \text{ (Not Significant)}$$

8. Human Assets and Upland Vegetable Farming

$$Y = 0.958 + (4.179E-03) t1 + (5.446E-03) t2 + (-1.11E-02) t3 + (4.676E-04) t4 \text{ (Not Significant)}$$

9. Natural Assets and Upland Vegetable Farming

$$Y = 1.013 + (2.002E-03) t1 + (9.28E-04) t2 + (-1.41E-04) t3 + (5.599E-03) t4 + (1.138E-02) t5 + (3.821E-02) t6 + (-8.65E-03)t7 + (9.115E-03) t8 + (-2.02E-03) t9 + (1.798E-03) t10 \quad (\text{Not Significant})$$

10. Social Assets and Upland Vegetable Farming

$$Y = 1.003 + (-4.17E-02) t1 + 5.208E-02) t2 + (-2.69E-02) t3 + (1.902E-03) t4 + (2.307E-03) t5 + (1.126E-02) t6 + (-3.93E-02) t7 + (4.226E-03) t8 + (1.804E-02) t9 \quad (\text{Not Significant})$$

11. Program Intervention and Upland Farming Systems

$$Y = 1 + (0.612) t1 + (0.23) t2 + (-0.528) t3 \quad (\text{Significant})$$

12. Program Intervention and Soil and Water Conservation in Upland farms

$$Y = 1.722 + (-9.83E-02) t1 + (-4.47E-02) t2 + (-0.356) t3 + (-0.426) t4 + (-0.265) t5 \quad (\text{Significant})$$

13. Program Intervention and Soil and Water Conservation in Watershed Areas

$$Y = 1.674 + (-0.508) t1 + (-0.183) t2 \quad (\text{Significant})$$

APPENDIX D. Histogram on the Relation of Upland Vegetable Farming System

Figure 7. Histogram on Yield

Dependent Variable: Upland Vegetable Farm

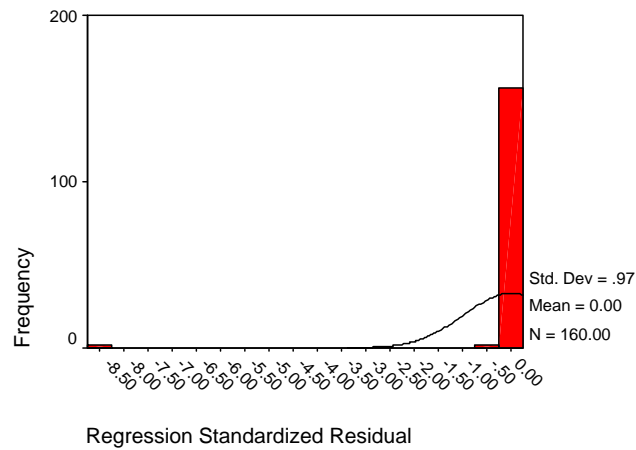


Fig. 8. Histogram on Gross Income/Hectare

Dependent Variable: Upland Veg. Farming

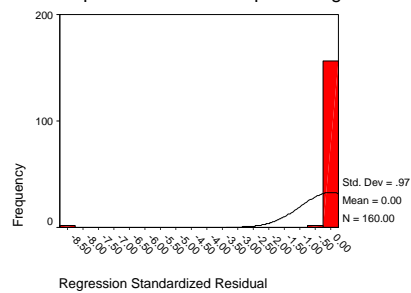


Figure 8. Histogram on Pricing and Marketing

Dependent Variable: Upland Farming System

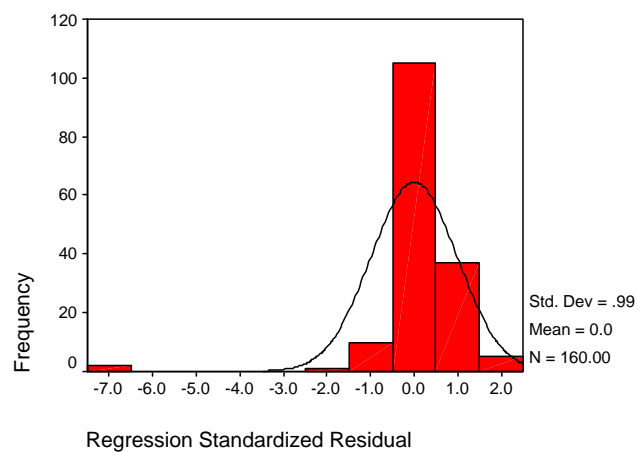


Fig. 9. Normal P-P Plot of Regression

Dependent Variable: FSVEGUS

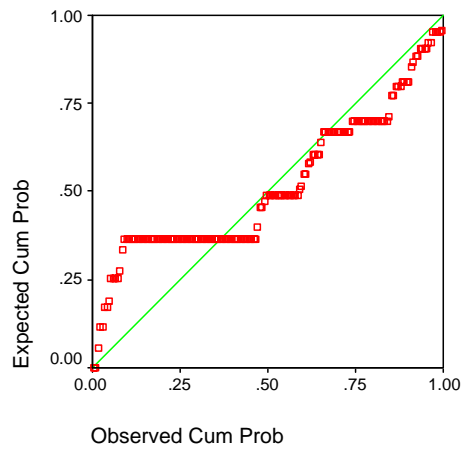


Figure 10 . Histogram on Terracing W/ Stone

Dependent Variable: Terrace W/ Stone Wall

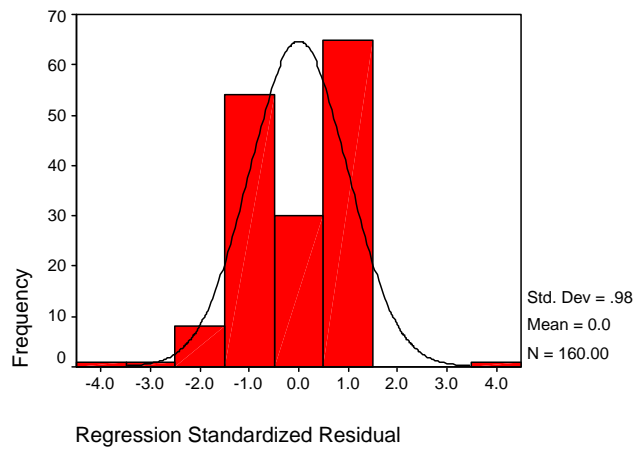


Fig. 11. Histogram on Terracing w/No Stone

Dependent Variable: Terrace W/ no Stone

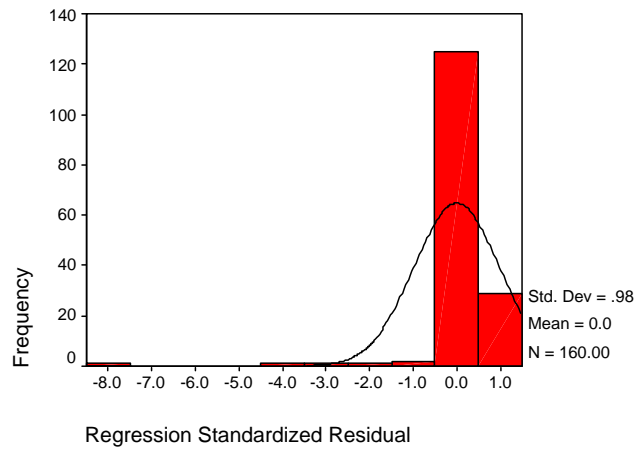


Fig. 12. Histogram on Acceptability

Dependent Variable: Upland Veg. Farming

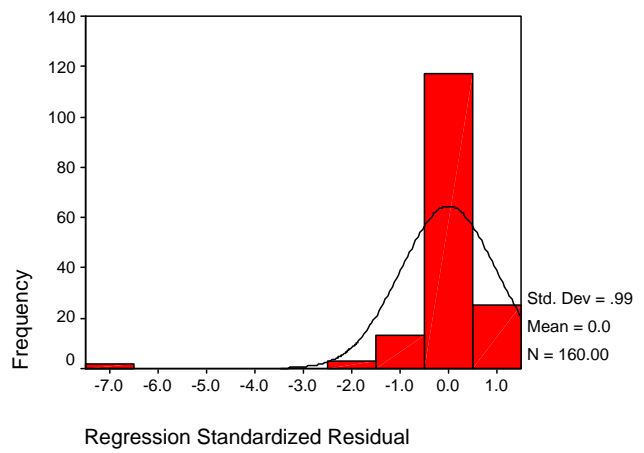


Fig.14. Histogram on Org. Present

Dependent Variable: Veg. Farming System

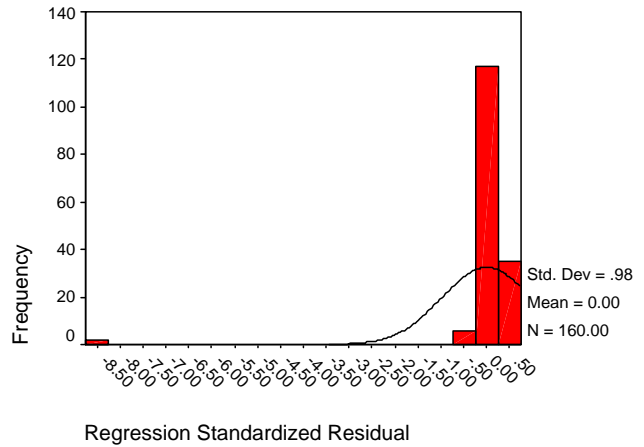


Fig. 15. Histogram on Physical Assets

Dependent Variable: VEG. FARMING SYS.

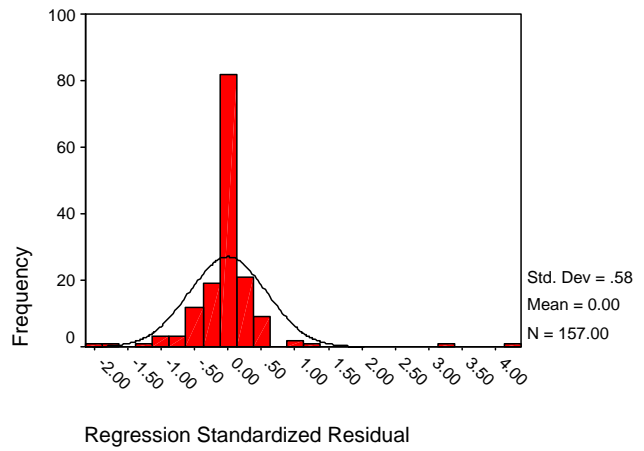


Fig. 17. Histogram on Intervention

Dependent Variable: With % W/O CBFM

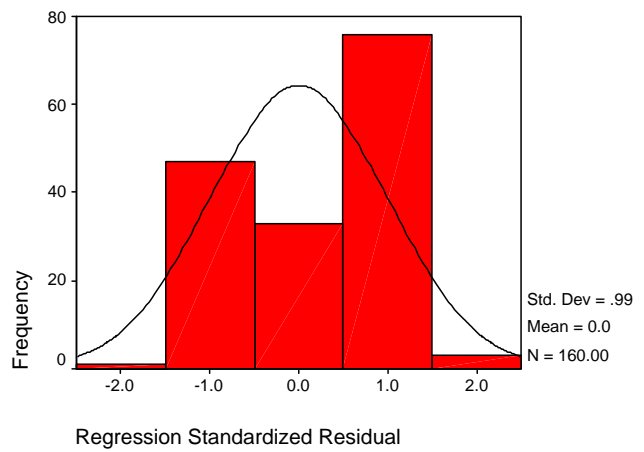


Fig.18. Histogram on INT. % SWC

Dependent Variable: WITH % W/O CBFM

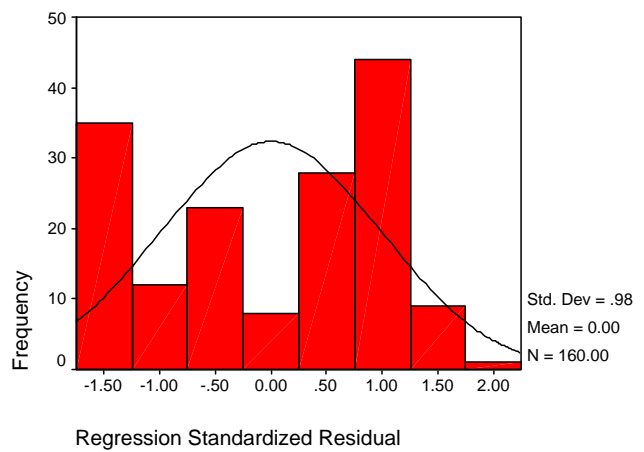
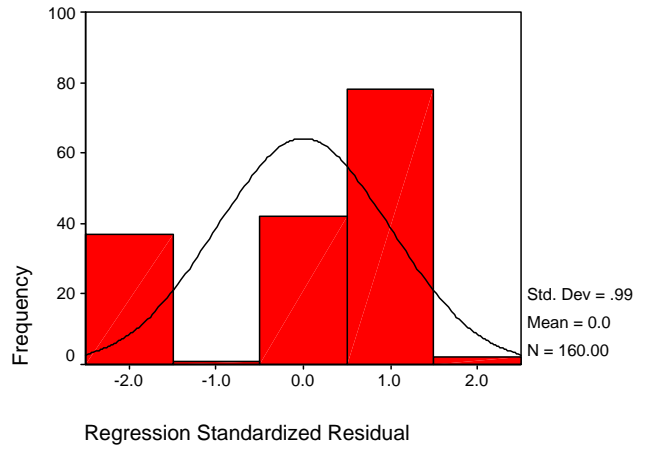


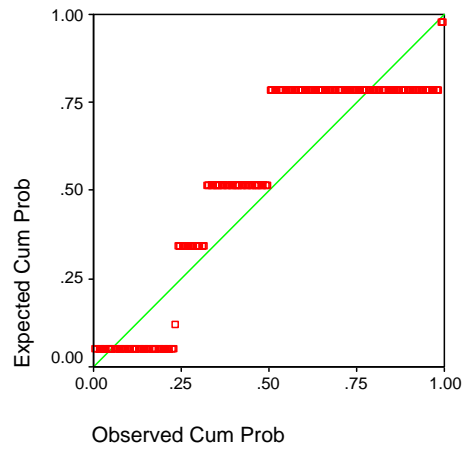
Fig.19. Histogram on INT. & SWC in FOREST

Dependent Variable: WITH & W/O CBFM



Normal P-P Plot of Regression Stand

Dependent Variable: PI



OTHER WATERSHED IN THE Cordillera (An Appraisal)

THE AMBUCLAO WATERSHED

Location

The Ambuclao dam is situated on the western part of the municipality of Bokod, Benguet province. It is 36 kilometers northeast of Baguio City and is accessible via the Baguio-Benguet – Nueva Viscaya road. It can also be reached through the Labey-Lacamen provincial road. Other sites of the barangay could be reached by hiking and a boat ride. The approximate area is 7,531.6 hectares covering the barangays of Ambuclao Proper, Adonot, Sanosol and Sombrero.

Historical Background

After the 2nd world war, Manuel A. Roxas, the President of the Philippines in 1948, directed the National Power Corporation in collaboration with the Westinghouse International to take a survey of the country's hydroelectric potential and prepare the Philippines Power Program. A major undertaking was the Ambuclao Power Project. The Harza Engineering Company of Chicago, USA was hired as engineering consultant.

In July 1950, the Ambuclao Power Project construction begun by virtue of Commonwealth Act No. 120 to generate power for the country and to provide fishing ground for the community. Ambuclao dam is one of the pioneer dams in the country that took 6 years to complete. The dam was completed on December 23, 1956 with a total project cost of 1,798,438 pesos.

The lower area of the Ambuclao was also converted into a smaller dam where water from Ambuclao is impounded into the Binga dam. In April 19, 1969 the Ambuclao and Binga dam were proclaimed as watershed area under Proclamation No. 548. The Ambuclao and Binga watershed has a combined area of 73,350 hectares. This also forms part of the two Cordillera forest reserves established on February 16, 1929

under Proclamation no. 217 with a total land area of 697,138.19 hectares. These watersheds are the catchments basin of the two multipurpose Binga and Ambuclao dam.

The dam utilizes the power of the Agno River, the longest waterway in Luzon, Philippines that has an energy potential of 400 GHW per year.

Characteristics

The area belongs to type I climate based on the Corona classification with two pronounced seasons. It is dry from November to April and wet during the rest of the year. The soil type is undifferentiated mountain soil that is loam, clay and sandy clay. The soil is suitable for agricultural crops. The land use consists of agricultural land, forest and residential, institutional and idle lands. The major forest tree species is Benguet pine (*Pinus insularis*) although some lowland trees such as narra (*Pterocarpus indicus*), mango (*Mangifera indica*) and mahogany trees grow at the lower and warmer parts. The population density is 2.59 per person per hectare with approximately 495 households (CRC, 1996).

People's attitude towards the construction of the dam

The construction of the Ambuclao dam, being the first of its kind, was not resisted or opposed by the people residing within the project then. Instead, the community leaders encouraged people to accept the project, for they believe that it was impossible to impound or dam the Agno River with such a volume of water permanently. The leaders also anticipated that the project would generate employment to the community. It was when the dam was completed that the residents of the community realized their beliefs were wrong. The situation implied that the ignorance and shortsighted views of the people served as the entry point for exploitation.

Impact of the Dam

1. Economic Benefits

a) Fishing

Under Commonwealth Act No. 120, the dam's reservoir shall serve as fishing ground for the community. At present, two types of fishing activities are performed in the dam reservoir. The floating fish cage culture and open type. Tilapia (*Nilotica*) and Gobi (*Mori*) are the fish found in reservoir. They use to catch mudfish, shrimp and crabs from 1960 to 1980. The number or volume per catch per day depends on the number of units of their fishing gear and the season. The fish are at its peak from March to April and decreases in October to December.

Fishing is a family enterprise where the father or son is involved in fishing activities and the mother or daughter is involved in marketing. The price of bigger Tilapia fish is 100 pesos per kilo and smaller fish at 50 pesos per kilo.

b) Local Employment

44% of employees of the National Power Corporation that maintains the Ambuclao Power Plant are from the municipality of which majority are from barangay Ambuclao. Employees range from plantilla position to security guards.

c) Electrification

Electricity that is generated from the dam is distributed to nearby far-flung provinces. While those affected by the dam's construction have sacrificed a lot for the sake of electricity, it is sad to note that some of those affected have not enjoyed the pleasure of having electricity. It was only recently (1990's) that the affected areas have been energized. Presently, those people residing near the power plant are enjoying free electricity up to 125 kilowatt per month.

2) Dislocation of Families

There were 350 families belonging to the Ibaloi ethnic groups that were displaced. In 1968, the government decided to resettle affected people in the adjacent province of Nueva Viscaya. The resettlement was not successful since other ethno linguistic groups and migrants from other provinces already occupied the area specified. Many people were resettled against their will and were confronted with economic loss and hardship. It affected their traditional way of life. Majority returned and went to the upper slope of the watershed.

In the 1970's, families affected were beneficiaries for resettlement at Princess Urduja in Palawan, Philippines. Although many went, they did not stay long for they could not socially and physically adjust to the environment. According to a returnee, they were given 6-hectare land, carpentry tools, a carabao and a house that measured 12 feet long by 14 feet wide. While there was economic opportunity, there was also a high incidence of malaria.

3) Submersion of Landholdings

5,500 hectares of rich agricultural lands were submerged in 1956 (CRC, .1996). There were 650 hectares of irrigated lands that were destroyed. The government paid the people a minimal amount for their land lost. While provision was made for new resettlement sites, payment for disturbance and community facilities were not given. Some opposed when they were driven from their land on the ground that ancestral homes, burial grounds and cultural traditions would be violated. The National Power Corporation was accorded support programs by paying 25 centavos per square meter for their rice fields but improvements made such as planting of fruit crops have not been paid.

4) Siltation and Erosion

In 1980, steady impairment of the Ambuclao power plant's efficiency was caused by years of unabated environmental abuses, especially in the watershed areas surrounding the dam's reservoir. The July, 1990 earthquake destroyed the plant's intake tower and tunnels were buried by silts. A natural risk is located within the area

called the “Bokod fault line”. The estimated average annual sediment yield of the Agno River was 3,958,757 cubic meters (NPC, 1988).

A major portion of the barangay is affected by soil erosion caused by logging, burning of forest and swidden farming. Erosion is prevalent during rainy season from July to October. In September 1992, the Agno River Power Service Incorporated (ARPOSI), a consortium led by the Meralco Industries Engineering Services, accepted the challenge to rehabilitate the Ambuclao dam on a very risky “no-cure-no-pay-scheme”. This means that if the consortium failed to complete the rehabilitation, the National Power Corporation will not pay all its expenses. After 3 years of rehabilitation, ARPOSI was able to restore the facilities of the plant into its normal capacity.

THE BUSOL WATERSHED

Location

The Busol watershed is located within the political jurisdiction of Baguio City and La Trinidad, Benguet province. The area is geographically situated between 16 degrees 25' 30" and 16 degrees 27' 09" north latitude and 120 degrees 27' 30" east longitude. Busol watershed is bounded on the north by barangay Ambiong, on the east by barangay Brookspoint and Liteng, on the east by Baguio-Ambuclao road and on the west by Bayan Park road.

The watershed has a total area of 336.85 hectares. Two-thirds or 112.20 hectares are within the City of Baguio while one-third or 224.65 hectares are within the jurisdiction of La Trinidad, the capital town of Benguet Province. The watershed is easily accessible and could be reached by any kind of transportation through the Baguio-Ambiong road. Busol watershed and forest reserve was proclaimed on April 27, 1922 under Proclamation No. 15 by then Governor General Leonard Wood.

Significance

The Busol watershed is the primary water source of the adjacent communities of Aurora Hill and Pacdal area that comprise 30% of the City's supply of water. There are water sources built in the area with their monthly average output of water such as: (a) Ambiong Deep well 1, 2 and 3 as well as the Idisan Deep well with average monthly output of 30,000 cu.m, 35,000 cu.m., 40,000 cu.m. and 10,000 cu.m. with a total monthly average supply of 125,000 cu.m. The water from the deep wells is collected at steel and concrete tanks before finally released to the concessionaires.

Characteristics

The area is irregular in shape with its aspect facing the southwest. Twenty percent of the area has a slope below 30% gradient. The elevation of the area ranges from 1,420 to 1,680 masl.

Land Use

Table 1. Land Use of Busol Watershed

LAND USE	AREA (Ha)	PERCENTAGE (%)
Open Land	118.86	35.31
Farm Land/Garden	94.55	28.09
Urban Settlements	33.78	10.04
Commercial (Piggery/Poultry)	0.045	0.01
Forestland	68.8	20.20
Reforested Area	15.21	4.52
Baguio Water District Nursery	0.065	0.02
University of the Philippines Nursery	0.200	0.06
CICM (St. Francis Convent)	1.31	0.40
Lamut Elementary School	3.00	0.89
Road System	1.83	0.46
Total	336.58	100

Socioeconomic Condition

The water demand has increased because of the increasing population of Baguio City and La Trinidad caused by in-migration and population growth. Baguio City has a water demand of 55,000 cubic meters per day such that water is rationed to the residents for 8 hours a day per week. The Busol watershed could produce 780 gallons per minute (BWD, 1989).

The area is inhabited by 490 families who built houses but are also engaged in economic activities such as farming. Timber poaching within the watershed area is particularly evident at the La Trinidad side. These occupants/squatters pose a great threat to the watershed specifically its water quality. The use of pesticides and fertilizers in the farms of households can contaminate the water. Their continued stay also resulted in expansion of their farms.

Development Interventions

1. Non-Government and Government Organizations

The problem on squatting and encroachment in the Busol watershed triggered the various sectors in the City of Baguio to make a collective action to protect and conserve the Busol watershed from further destruction. This was participated by Baguio Regreening Movement (BRM), a multi-sectoral organization and the “Timpuyog ti Iit”, an association of barangay officials, the City Government of Baguio and other private and government agencies in Baguio city. This resulted in the increase of forest cover from 20% to 40% at the Baguio side of Busol watershed.

The participation of the community, NGO, LGU’s Other Government Agencies (OGA) and the academe were tapped to assist the Busol Watershed Task Force in the protection of the watershed. They were also mobilized to participate in reforestation and tree planting activities. The awareness and the need to have source of water for the community created the strong collaboration of the different stakeholders to collectively protect the source of their water. Considering that the watershed is located within the city where population is concentrated, the sustainability of water for domestic use becomes a necessity. However, some government officials are

constrained to implement demolition orders since they consider the people as a source of votes during election time.

2) Eco-Walk Project

This is a project introduced and adopted as a strategy in value formation and increase the environmental awareness as well as reforestation and protecting the area. The project adopted the “muyong”, an Igorot term for private man-made forest concept. Students from various schools in the City of Baguio are allotted an area for them to plant trees and care for them.

3) Creation of the Busol Task Force

The awareness on the importance of the watershed as a source of domestic water supply for the increasing population of Baguio City prompted the creation of the Busol Task Force in September 1992. The membership comes from the Department of Environment and Natural Resources (DENR), the City government of Baguio, the Baguio Water District and the Philippine National Police. The objective of the Task Force is to pursue an integrated sustainable development of Busol Watershed through the collective participation of the stakeholders through the involvement in the reforestation, forest protection and information education campaign activities. This activity was followed up by including the La Trinidad, Benguet side of the watershed. A Memorandum of Agreement was signed by the Government of Baguio City, La Trinidad Municipal Government of Benguet, DENR, Baguio Water District, La Trinidad Philippine National Police and the Baguio Regreening Movement.

4) Protected Area Management Board

In 1995, the Protected Area Management Board (PAMB) headed by the DENR Regional Executive Director and members coming from various sectors were created. This is the policy-making body for Busol watershed. The Busol Task Force regularly reported all their activities in the watershed to the Protected Area Management Board. Activities of the Task Force include filing of 124 cases of illegal occupancy and illegal cutting of trees in the watershed. Prosecution depends on the court handling the case. Demolition orders for new structures in the watershed had been issued.

Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis of the Busol Watershed

I. Strengths

1. Highly committed Task Force members
2. Cohesive Task Force coming from the Philippine National Police, Baguio Water District. Local Government Units of Baguio City, Department of Justice and the DENR.
3. Clear responsibilities of members of the Task Force
4. Watershed area is fully delineated and boundaries established

II. Weakness

1. Limited representation from the La Trinidad side to the Task Force
2. Limited resources such as transportation and telecommunication facilities
3. Lack of para-legal skills
4. Networking and linkage difficulties with Local Government Units for the deputizing of forest guards as well as lack of funding requirements for the development and protection of the watershed

III. Opportunities

1. Increasing awareness of the community on environmental protection
2. Strong multi-sectoral support for the “eco-walk” project and protection activities
3. Available funding for environmental protection

IV. Threats

1. Bribery and harassment from squatters and timber poachers
2. Increasing encroachment in the watershed area

3. Decreasing water production. There are only 860 gallons per minute in 1992 to 780 gallons per minute in 1997
4. Decreasing forest cover due to expansion of vegetable farms at the Benguet side

Considering the importance of Busol watershed as a source of domestic water source of the people in the City of Baguio and La Trinidad. Collective actions among the citizenry are also a means to rehabilitate and protect the watershed area. However there are many problems and issues met such as (a) illegal occupancy or squatting, (b) presence of titled lots inside the watershed area, (c) water pollution due to vegetable farming and squatting, (d) forest fires, (e) timber poaching, (f) soil erosion and (g) non-implementation of demolition orders due to legal impediments.

CAMP 8 WATER SUPPLY RESERVATION

Background

The Camp 8 water supply reservation was established by Executive Proclamation No. 107 on November 19, 1936 as one of the city's water source covering an area of 27.5 hectares. Out of the total area, the Baguio Water District fenced only 13 hectares in 1994 to prevent encroachment. Of the 13 hectares, 70% or 9 hectares is forested while 30% is denuded and is cultivated with root crops and rice paddies. These cultivations are concentrated at the southern and western portion of the watershed especially along the creeks and waterways, thus the rapid destruction and denudation in the areas.

Significance of the Area

The area is one of the City of Baguio's sources of water. It is also one of the greenbelts that serve as absorbents of noise, carbon dioxide and other forms of pollution within the City. The conservation, protection and maintenance of the watershed mean the sustainable supply of potable water for the communities around this watershed area.

Intervention Activities

A) Watershed Protection

In 1994, the Baguio Water District, the main agency responsible for water supply in the City of Baguio, constructed a perimeter fence on the remaining 13 hectares to prevent further encroachment and entry within the watershed area. Shanties that were illegally constructed were dismantled. Security guards were also hired by the Baguio water District to secure its facilities and help patrol the area to prevent vandals and destruction. Despite all the protection measures, illegal activities still continue in the area and seem uncontrollable in the years to come. Recently, the Baguio Water District sent a position paper to the Baguio City Council strongly opposing a resolution allowing the Camp 8 farmers continued occupation and possession over their improvements which they continue to operate up to the present.

B) Reforestation Activities

The denuded areas of the camp 8 watershed have been the subjects of reforestation efforts. NGO's, NGA's, PO's and student volunteers conduct yearly tree planting but the lack of commitment from the participating agencies to return visit to their planting area to conduct maintenance works like ring weeding, fire line construction and seedling tendering leads to the poor survival of the planted seedlings. It is in this regard that concerned government agencies and organizations should intensify conducting information and education campaign to increase community awareness on the importance of this watershed reservation. The Baguio water District, being the Committee Chairman of the Regreening Committee of the Baguio regreening Movement, spearheaded the "Adopt-a-Watershed Program" of the Camp 8 reservation in 1994. Portions of the watershed are assigned as "adopted areas" of volunteer groups and organizations that may come from the school, surrounding communities and barangays. A Memorandum of Agreement between interested parties and the agency are made where conditions and limitations of the adoption are specified. Six organizations had signified their intention to helping the development, maintenance and protection but only a few had come up with their programs in coordination with the BWD.