

Japan International Cooperation Agency

**HMG/JICA Community Development & Forest/ Watershed Conservation Project
HMG/JOCV Greenery Promotion Cooperation Project**

Workshop on Gender Sensitivity in
Community Participation
Pokhara
20-25 June 1996

Case Study No. 7

Language : English

Case Study
on
Gully Control in Deurali

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Site Office: Deurali

District: Kaski

**Presentation
Of
Gully Control Sub-Project
in the Workshop on Gender Sensitivity in people participation**

Introduction:

The HMG/JICA Community Development and Forest/Watershed Conservation Project located in Pokhara is about 200 km. West of Kathmandu. Its specific objective is to enhance the participation of women in mobilization access and utilization of community resources. It has a clear guideline to enhance the women, the higher priority will be given to those sub-projects which will commit maximum women's participation in the decision-making and sharing of benefits. It is also mentioned that there should be minimum 50% women's involvement in the management committee of the users' group to initiate any of the activities. The CDFWCP conducts different types of workshop, seminar and training for strengthening the M/P team and other project related field staffs. Mean while, the CDFWCP is going to conduct a workshop on gender sensitivity in community participation in Pokhara. In this occasion, I am going to present a case on Gully Control which is a completed sub-project in Deurali site.

Deurali VDC is located about 25 km. East of Pokhara with Shishuwa VDC in West, Thaprek VDC (Tanahun District) in South, Rupakot VDC in North and Siddha VDC in East. About 4000 people inhabit in Deurali VDC. The HMG/JICA/JOCV is conducting community development and forest/watershed conservation and greenery promotion cooperation project. The project has mainly two types of programmes, that is community level and inter-community level sub-projects. Community level sub-project is a project related to a ward selected by the M/P teams. For this programme, the Deurali site is conducting different types of sub-projects. Among them, The Gully Control sub-project was conducted in ward No. 5 after investigating and negotiating with the villagers.

1. Profile of the Ward :

Ward No. 5 is the second large scaled ward of Deurali VDC which has already been selected by the M/P Team. It lies to the North-East part of our office, Khadagaun, Ripsnwara and Gairagaon are three different communities where total 450 people live including 230 female with in 72 households of Gurungs, Brahmins and Chhetris. There are 33 households of Gurung in Khadagaon communities, 14 households of Chhetri in Ripsnwara communities and 35 households of Chhetri, Brahmin and Gurungs in Gairagaon community.

There is a primary school in this ward but the children of Ripshwara community go to another school of Rupakot VDC. The literacy rate of this ward is about 60% (male is 70% and female is 30%). Where as the illiteracy rate is 40% (male is 30% and female is 70%) .

Ward No. 5 is completely hilly area. all the agricultural land is dry land (*Bari*). Small amount of land is used as wet land (*khet*). Due to the shortage of water and irrigation, the agriculture production is low. So, most of the people join Indian army, British army and become *Lahure* in another country which is the main economic sources of this ward . For about 7 months they buy food in the market. Most of the part of this ward is covered by forest. If they understand the advantage and disadvantage of the forest and the present situation and conserve the forest they can utilize it as an economic source.

We can easily understand the profile of different community of Ward No 5 from the table given below:

Name of Community	No. of Hhs.	Population			Ethnic Groups	Literacy Rate		Economic Sources
		M	F	Total		M	F	
Khadgaon	33	100	102	202	Gurungs	60%		Ex-army, Agriculture, Lahure
						M 70	F 30	
Ripsnwarra	14	51	58	109	Chhetri	55%		Agriculture, Lahure
						M 70	F 30	
Gairagaon	25	80	71	151	Brahmin, Chhetri	70%		Agriculture, Nepali Service, Lahure
						M 60	F 40	

Similarly here is a profile of each households of Khadagaon community where the sub-project implemented.

S.N.	Name of House Owner	Population			Literate		Economic Sources	Occupation
		M	F	Total	Under SLC	SLC		
1.	Mr. N. G.	1	1	2	x	x	Ex-army	Farmer
2.	Mr. N. S.	3	2	5	2	x	Indian army	Farmer
3.	Ms. B. G.	1	3	4	x	x	Lahure	Farmer
4.	Mr. B. G.	2	2	4	1	x	Nepal army	Farmer
5.	Mr. M.B.	4	3	7	1	x	Driving	Farmer
6.	Mr. Y.B.	2	4	6	2	x	Ex-army	Farmer
7.	Mr. K.S.	3	1	4	2	x	Indian army	Farmer
8.	Mr. N. B.	4	1	5	2	1	Ex-army	Farmer
9.	Mr. N.S.	4	3	7	2	x	Ex-army	Farmer
10.	Mr. T.B.	5	3	8	2	x	Ex-army	Farmer
11.	Mr. L	2	2	4	x	x	Nepal army	Farmer
12.	Mr. L.B.	3	4	7	2	x	Service	Farmer
13.	Mr. A	4	1	5	1	x	Lahure	Farmer
14.	Mr. M. B.	1	2	3	x	x	Lahure	Farmer
15.	Mr. R.B.	2	3	5	1	x	Ex-army	Farmer
16.	Mr. B. B.	5	7	12	1	x	Service	Farmer
17.	Mr. S.B.	1	1	2	x	x	Ex-army	Farmer
18.	Mr. K.M	3	2	5	3	x	Indian army	Farmer
19.	Mr. P.S	2	3	5	2	x	Indian army	Farmer
20.	Ms. M.G	1	2	3	2	x	x	Farmer
21.	Mr. D. S. G	3	2	5	3	x	x	Farmer
22.	Mr. R. B.	3	2	5	2	x	x	Farmer
23.	Mr. H. B.	4	2	6	x	1	Lahure	Farmer
24.	Mr. T.B.	2	3	5	3	x	Ex-army	Farmer

25.	Mr. C.S.	5	6	11	2	x	Indian army	Farmer
26.	Ms. D.M	6	8	14	4	x	Lahure	Farmer
27.	Mr. I.B.	4	2	6	1	x	Lahure	Farmer
28.	Mr. T.B.	4	4	8	2	x	Ex-army	Farmer
29.	Ms. B.G	5	9	14	2	1	Service	Farmer
30.	Ms. H.M	3	4	7	3	x	Indian army	Farmer
31.	Mr. B.B.	5	1	6	3	x	Ex-army	Farmer
32.	Mr. B.M.	1	6	7	2	x	x	Farmer
33.	Mr. L.B.	2	3	5	3	x	Lahure	Farmer

2. Main Activities in the Ward :

People of ward No. 5 demanded about 8-9 demands. Out of those, 4 sub- projects have been already implemented. They are 1) Gully Control, 2)Trail Improvement/Erosion Prevention 3)Pyaulikhola Drinking Water, and 4)Jogiko Pandhera Drinking Water and Source Protection. Except Pyaulikhola Drinking Water sub-project, all three sub-projects has been completed.

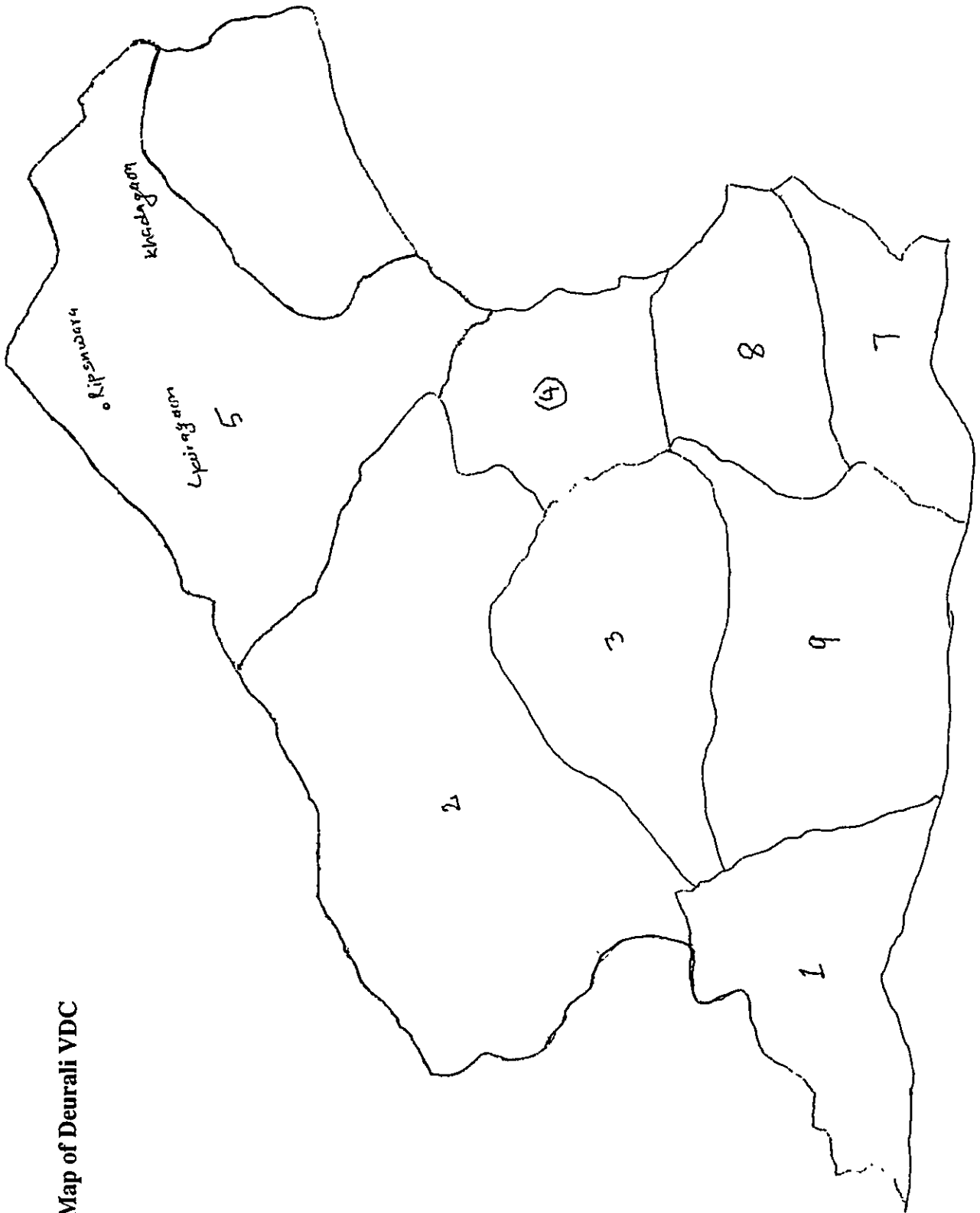
Gully control sub-project controls the landslide (houses) of Khadagaun. The Gairagaun Trail Improvement/Erosion Prevention sub-project will control the cutting of soil from the road side and make easier to walk for more people and domestic animal. The Jogi ko Pandhera Drinking Water and Source Protection sub-project will provide drinking water to about 109 people of 14 households of Ripsnwara. The Pyaulikhola Drinking Water sub-project will provide drinking water to the 200 people of Khadagaon.

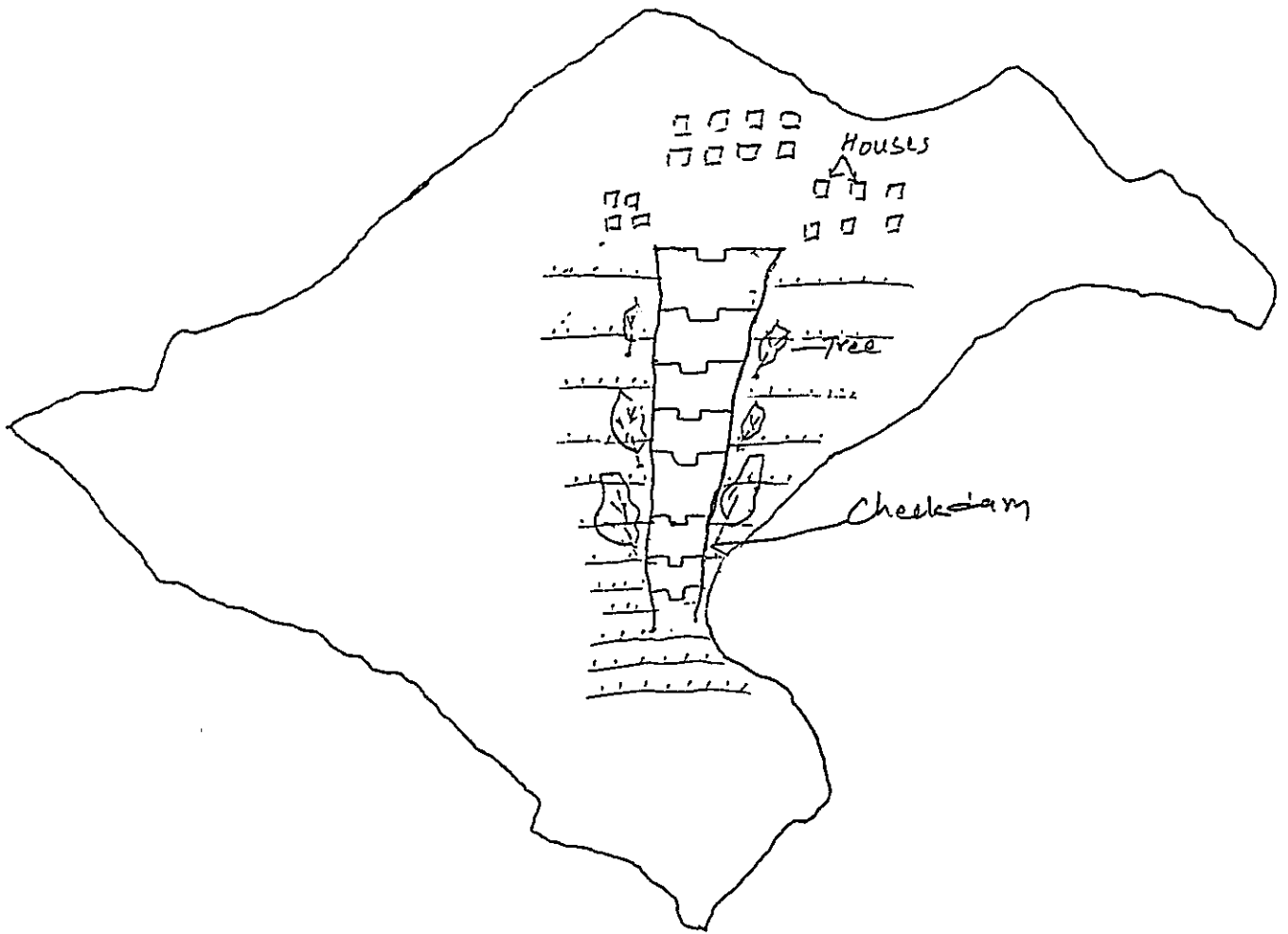
More than hundred thousand rupees of the Pproject has been spent for these sub-projects implementation.

The Gully Control is a completed sub-project of this ward having about 200 peoples within 33 households as beneficiaries. The No. of male and female beneficiaries are the same. The estimated cost of this sub-project was Rs.50906 where as the Project cost was Rs. 26192 and people's contribution was Rs. 24714. People of this ward demanded this sub project as the first priority. We recommended it on 19 Jan, 1996 and approved on 1st Feb, 1996. The work started on 26 Jan 1996 and completed on 9 Feb. 1996. In total it took 15 days for this sub-Project to be completed, where as the estimated plan to complete this sub-Project was 29 days. Total 495 people including 240 female were engaged for this sub-Projects completion. So we can say that the participation of male and female was the same.

We can easily understand from this table about the implemented sub-project in this ward:

Map of Deurali VDC





The Gully Controll Sub-project of Ward #5 in Map

S N	Community	Name of Sub-project	Total Hhs.	Population			Labour		Total Days	Project Cost	People Cost	Total Cost	Start. Date (1996)	Comp. Date (1996)
				M	F	Total	M	F						
1.	Khadagaon	Gully Control	33	100	102	202	255	240	15	26192.00	24714.40	50906.40	26 Jan	9 Feb
2.	Gairagaon	Trail Improvement Erosion Prevention	21	81	74	155	210	147	17	15944.70	20369.90	36314.60	17 Apr.	5 May
3.	Ripsnwara	Jogi Ko Pandhera D.W. & Source Protection	16	51	58	109	205	380	38	16170.58	11229.14	27399.72	4 Apr.	29 May
4.	Khadagaon	Pyaulikhola D.Water	35	107	110	217	-	-	-	42809.55	11867.00	64667.55	4 Apr.	-

We are going to plant some fodder, fuelwood and timber saplings in some area of this ward, we have already conducted an improved stoves installation training as an extension education programme to the women's group of this ward.

3. Gender Sensitivity : Efforts and Insights :

When we first visited this ward people considered that only men are the head of the households, who can attend every activities of community development. Then we talked to them from time to time, that it is an established fact that sustainable development can be achieved only with the full and equal participation of both women and men as decision makers in the identification of needs planning, implementation, monitoring and evaluation of project activities.

Then we conducted village level meeting by that time they had slightly changed their attitude and both male and female attended the meeting. Before that only men used to come to attend meetings and that also very late. Gradually they started talking about their needs and reached in the conclusion of their priority needs.

They decided that the control of gully is the most important needs for them. Therefore, we observed the gully affected area in Khadagaun community. Then made a estimate of dry stone checkdams after making negotiations with the villagers. They formed a users committee consisting of both male and female. This users' committee consists of 7 members, of which 3 are female. They were interested to implement that gully control sub-project. After the final estimation the recommendation committee recommended it to the approve committee. After the approval the villagers implemented that sub-Projects.

At that time, it was observed that the participation of male and female was the same. Total 495 people including 240 female from 33 households worked in that sub-Projects where as all beneficiaries were Gurungs. They completed that sub-Project within 15 days where as the estimated completion days were 29 days. In total 8 checkdam were constructed. Mainly male were quarrying and chiseling stone while female gathered stone at the construction site. Female were not used to chiseling stone because male did such types of hard work. Making wall of checkdam also done by male. Now male and female are satisfied with the checkdam. They are planning to plant broom grass and Napier grass at the side of checkdam in this coming rainy season which is our project's objective too.

Division of Work:

S.N.	Details of Work	Responsible	Age	Remarks
1.	Earth Work Excavation	Male	40-59	Old Men
2.	Quarrying of Stone	Male	20-39	Young Men
3.	Carrying Stone at Cons. Site	Female	20-53	All Women
4.	Chiseling of Stone	Male	20-59	All Men
5.	Making Wall	Male	40-59	Old Men

Users' Committee and Labour Contribution:-

	Total No.	Male	Female
Management Committee	7	4	3
Labour	495	255	240

Some information about Gender

Process of making rules: All beneficiaries (Men/Women) gathered at a place and then made rules.

Number of participants : 495, Male - 225 , Female - 240
Participant's age : Men - 20 to 69 , Women - 20 to 52
Beneficiaries caste : All are gurungs

Utilization of people's wages : The money was distributed to all the present beneficiaries on daily basis. There was no different wage for man and woman. They used those money for buying food, notebook for children e.t.c. Some money was kept for the maintenance if damaged.

Rule:

- * The sub-project should be completed in the fixed time as mentioned in joint work plan.
- * All beneficiaries (one from each HH) should contribute to the sub-project in the form of participation.
- * If one is absent in the sub-project he/she should pay Rs. 25.00 to the sub-project.
- * If all the HH consists of men, then he should come but if not then women would also be suitable .

4. Major problems and obstacles Encountered :

The people of that community where the sub-project has been completed thinks that men are the heads of households and only they can attend in the meeting and other community activities such as decision making, planning, implementation, monitoring and evaluation etc. Some women themselves feel that it is not very fruitful to insist women's representation on committees. Because neither the governmental nor the non-governmental Organization (informed) made them aware about the gender sensitivity.

Then we encouraged women to attend meeting, give them opportunity to actively participate in every activities etc. When they prioritized gully control we advised them to make dry store checkdam, then they (mainly by men because they saw in other places) opposed to our suggestion of dry stone checkdams. They wanted Gabion boxes and fill it up with stone. We informed them from time to time about the advantage and disadvantage of dry stone checkdam and Gabion boxes checkdam. Finally, we were able to change their attitude and they implemented that sub-project. After the completion of the sub-project, they reported to us that dry stone checkdam is sufficient for their gully treatment and it was not necessary to keep Gabion boxes.

Due to the equal participation of male and female in the sub-project identification, decision making, management committee and implementation the gully control sub-project succeeded. The beneficiaries of this gully control sub-project looks very happy. Therefore, we can say that this sub-project is a successful one.

5. The recommendation for strengthening gender sensitivity for the empowerment of people and sustainable development are as follows:-

- * All planning and implementation staff from management to field level should be gender sensitized, so that they can apply it in the field.
- * Qualified project staff should be built up through training and educational programme and placed at management level, by this they can easily transfer their knowledge to the villagers.
- * There should be an effort to empower women through basic and functional adult literacy training programme related to community development and forest/watershed conservation management, to enable women to participate more effectively in meeting and to read manuals.
- * There should be clear and transparent decision making procedures by projects management, so that M/P team follow can it in the field.
- * There should be clear and simple guidelines and flexible operational procedures to facilitate people's participation in forest/watershed management, so that there will not be any confusion to implement the sub-project.
- * Project identification, planning, implementation and monitoring is a necessary precondition for community participation and empowerment of women at the local level. So, we should encourage women to participate in all activities.
- * Recruitment and promotion criteria of professional staff should be reviewed in light of women's household constraints and responsibilities. Support measures to overcome these constraints such as child care, domestic work, cooking, collection of firewood etc. should be considered.
- * Training must be held at a convenient time and place for local women preferably away from their work site activities and when they are not engaged in agricultural and domestic work. Women trainers should be employed for training at the grassroots level as much as possible. Because if users are trained, they can apply their knowledge in the period of project implementation and maintenance.

If these types of recommendation is followed carefully that condition will be the indicator for the second years operation and also in the coming future . There are mainly two types of indicators. They are quantitative and qualitative production of skilled labour by each sub-projects denotes quantitative indicator. If there is a big gully control sub-project, a definite No. of skilled labour have to be produced is an example of quantitative indicator.

Similarly, motivated and made aware people in the community, equal participation in project identification, management committee, implementation, monitoring and evaluation by male and female, participation of occupational castes, people in different activities, good motivator in different community by themselves, well co-ordination between male and female, one community to another community, occupational caste to upper caste, establish of fund for every sub-projects, keeping minute of different agendas in the Register, are the qualitative indicator for the second year's operation and for the future.

I asked some questions to the villagers (7 male and 3 female) individually, which I want to present here.

A. Name - R.B.G. (chairman of committee)
Sex - Male
Age - 34
Qualification - Test
Occupation - Farmer
Family - 5: Male - 3, Female - 2

Q.1. How do you evaluate the sub-project ?

- It was the first sub-project conducted by JICA in this ward so, all men and women were interested to complete it. We didn't take food in the day time also. Maximum labour spent for this sub-project. I even rewarded some women.

Q.2. What is your impression?

- Generally the winter season is the off season for cultivation. So, we used our free time to fulfill our problem. So it had positive impact on us.

Q.3. What are the strength of the sub-project ?

- We couldn't sleep comfortably and we feared that the village would slide in the rainy season. Now we do not have such fear.

Q.4. What are the weaknesses of the sub-project ?

- There is no weakness as far as I feel.

Q.5. Suggestions for improvement?

- Plants like Broom grass and Napier grass should be planted in the gully side.

Q.6. Vision about gender?

- Actually all worked as they could. There was no compulsory labour division for women and weaker ones. Before project implementation all men and women gathered at a place and compromised that for participation men would be preferred if not women would be fine.

B. Name - Ms. P.M.G.
Sex - Female
Age - 29
Qualification - x
Occupation - Farmer
Family - 5: Male - 3, Female - 2

Q. 1. How do you evaluate the project?

- Positive impact : We eliminated the probability of the village sliding away.

Negative impact : Though my house is a little far from that gully, I was involved in this sub-project.

Q.2. What is your impression?

- The soil was washed away by heavy rainfall annually. If we had not made these checkdams, the up land and some of the houses would have slide away. We solved this problem and I am happy for this.

Q.3. What are the strength of the sub-project ?

- We used up all stone for making checkdams, so there is no possibility of being destroyed.

Q.4. What are the weaknesses of the sub-project ?

- In my opinion one checkdam is a little weak, may be it will put the others into risk too.

Q.5. Suggestions for improvement?

- Maintenance is necessary if it breaks, we should not make this as a dustbin or a dumping site, we should plant Broom grass at the sides.

Q.6. Vision about gender?

- We gathered at a place and decided that all the houses are equally responsible to make this checkdam. If one is not present should be made to pay some money (Rs. 25/day).

If men and women work together, we can solve any problem.

C. Name - B.B.G.
Sex - Male
Age - 44
Qualification - Ten
Occupation - Farmer
Family - 6: Male - 5, Female - 1

Q.1. How do you evaluate the sub-project ?

- A little difficult to complete the sub-project.

- To collect stone at the site is the most difficult.

- If there was skilled (perfect) labour in the sub-project, it would have made the sub-project more desirable.

- All men and women participants were interested to complete the sub-project.

Q.2. What is your impression?

- It has made me happy. I am far away from the fear of landslide. If I had some knowledge and idea about dry stone checkdam, I would have made.

Q.3. What are the strength of the sub-project ?

- I have no fear from heavy rain now a days.

Q.4. What are the weaknesses of the sub-project ?

- No.

Q.5. Suggestions for improvement?

- Plantations should be done at the gully side.
- No. of checkdams should be increased.

Q.6. Vision about gender?

- All were co-operative during the time of project implementation.
- Women had not attended any meeting before this project initiative.
- Now women attend and participate in every activities in the community.

D. **Name** - Ms. H.M.G.
 Sex - Female
 Age - 36
 Qualification - x
 Occupation - Farmer
 Family - 7: Male - 3, Female - 4

Q.1. How do you evaluate the sub-project ?

- Because of controlling the sliding of the village, it is very nice for us.

Q.2. What is your impression?

- It has saved the village, bari from sliding . So, it has made me happy.

Q.3. What are the strength of the sub-project ?

- Checkdams were made from local resources (manpower, stone),. And the checkdams also seem to be durable. I hope it will help to prevent landslide.

Q.4. What are the weaknesses of the sub-project ?

- No.

Q.5. Suggestions for improvement?

- Plantation should be done at the gully side.

Q.6. Vision about gender?

- We did not have difficulties at the time of project implementation. Before the project implementation, we gathered at a place and made rule for its implementations. If a house has a man, he should come if not, then the women should come.

Annex 3. Face Sheet of Subproject (1)

Date: 29 May, 1996

No.: 1

1. Title of Subproject: Gully control	
2. Location: Khadagaun	Ward No.: 5 VDC: Deurali
3. Total Cost: Rs. 50906.00 (100 %)	6. Approved Date: 15 Feb., 1996
4. HMG/JICA: Rs. 26192.00 (%)	7. Starting Date: 26 Jan., 1996
5. User Group: Rs. 24714.00 (%)	8. Completion Date: 9 Feb., 1996
9. Total No. of Benefited Households: 33	(Schedule Castes: -)
10. Total No. of User Group Committee Members: 7	(Female: 3 Male: 4)
11. Total No. of User Group Members: 192	(F: 99 M: 93) (SC: -)
<p>12. Summary of the Subproject: (Objectives, Main Activities, Methodology, Problems and Obstacles encountered, Monitoring, Maintenance, Sustainability, etc.)</p> <ul style="list-style-type: none"> * Control the landslide and prevent the whole village from sliding and teach the users that they can control such type of gully by themselves, were the objectives of this sub-project. * The Main Activities of the sub-projects was the construction of 8 Nos. of checkdam. * The Methodology of the sub-projects was maximum peoples participation. 	
13. Community Participation: The sub-projects was satisfied with the community participation. All the household contributed equal participation.	
14. Gender Consideration: Total 255 male and 240 female works in this sub-project. There was full participation by both male and female.	
15. Environmental Consideration: Both male and female are confirmed that it will help to control landslides and balanced the environment..	

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**HMG/JICA Community Development & Forest/ Watershed Conservation Project
HMG/JOCV Greenery Promotion Cooperation Project**

Workshop on Gender Sensitivity in
Community Participation
Pokhara
20-25 June 1996

Case Study No. 8

Language : English

Case Study
on
Improved Cooking Stove Installation
Training in Kristi

Prepared by: Mr. Kenji Kawada

Site Office: Kristi

District: Kaski

Introduction

Since we started working at Kristi Site, we had implemented the "Improved Cooking Stove Installation Training" (hereinafter "ICSIT") five times at Ward#3,4,5,and7.

Now I'm reporting the result of the Training carried out 3times at two wards,ie,#5and7. These two wards have some similarities about the standards of living. But from the view point of development works, two groups' experience and nature ware quite different, namely #7people had a lot of activities, but#5people had almost nothing. Therefore I studied and interviewed with some people who had participated the ICSIT at ward #5and7 about the conditions of ICS etc.

I. Ward Profile

Ward #	# 5	-# 7
Population	295	600
Female	200	400
Male	495	1,000
Households	95	150
Castes	Thapa 51 Kunwar 41 Gurung 3	Khat r 85 Bahun 3 Parajuli 22 Thapa 3 Kami 16 Kunwar 3 Karki 15 Damai 2

I-1 Ward #5

Ward#5 lies the deepest south-west area at Kristi VDC, it is a border town of Shangja District. They have an abundance of drinking water. Ward#5 is one of the farthest wards from Pokhara in the VDC. Therefore they are not so poor, but their living conditions are not so convenient, too.

More than 70% men are working away from homes in foreign countries or another place, and the households are not many.

Therefore it seems that the field of women's development works is large. Electrical facilities have not installed.

I-2 Ward#7

The ward#7 lies center of the VDC ,and it extends north and south. Same as ward#5, They have convenience of drinking water, but they haven't got the benefit of electrical facilities. It seems that they are richer than ward#5 people. Our Inter community level activity (hereinafter ICLSP ; Saurbote Gully Control) have been implemented between this ward and ward #1, and lots of members of the Mothers Group also what had joined the ICSIT, have been working as the users of ICLSP.

II. Main activities

II-1 Cases of ward#5

No sub-project are on going excluding these ICSIT.

II-2 Cases of ward#7

Inter community level activity

Name of Activities : Saurbote Gully Control

Total Cost Estimate : NRs.519,912.92

HMG/JICA Portion : NRs.255,487.00

Users Portion : NRs.264.425.92

Date of Approval : Jan.16,1996

Benefited Households : 75Hhs

Remarks: This sub project has already finished, installation wire & bamboo Check dams ,plantation of grass & grooms.

Community level activity-1

Name of Activities :Thulo Khola (Chhapswara) Drinking Water Supply

Total Cost Estimate : NRs.81,852.01

HMG/JICA Portion : NRs.45,749.35

Users Portion : NRs.36,102.74

Date of Approval : Feb.25,1996

Benefited Households : 70Hhs

Remarks: Already finished. Water supply system is working well.

Community level activity-2 (A)

Name of Activities : Malagiri Trail Improvement (& Gully Control)

Total Cost Estimate : NRs. 20,751.08

HMG/JICA Portion : NRs. 8,950.77

Users Portion : NRs. 11,800.31

Date of Approval : Apr. 29, 1996

Benefited Households : 89Hhs

Remarks: This sub project is on going very slowly due to lack of an active person who is sick.

Community level activity-2 (B)

Name of Activities : Malagiri Gully Control (& Trail Improvement)

Total Cost Estimate : NRs. 21,688.92

HMG/JICA Portion : NRs. 15,903.57

Users Portion : NRs. 5,765.35

Date of Approval : Apr. 29, 1996

Benefited Households : 89Hhs

Remarks: Same as No.1.

III. Gender Sensitivity

III-1 Out line of implemented the ICSIT

I selected two wards ,ie;#5 and #7, for my study among the four wards we had implemented the ICSIT five times. The reasons are followings;

- (1) Both wards have no electrical facilities ,but have much drinking water for daily lives. It seemed that the living environments are not so different.
- (2) Therefore it was considerable that the living standards of both wards are not so different.
- (3) #5people had no experience in a women's group before.
- (4) All the ICSIT were conducted in the same curriculum by the same resource person.

At first we tried to let every participant install 3pcs of the ICSs (in their own kitchen and the others two), but it was difficult to do actually The reasons were followings.

<1> The understandings of all participants weren't same, and sufficient.

<2> Finally few person could continue the installation the ICSs to the others.

<3> Busyness with household affairs

After that we arranged the ICSIT to be not compulsory as we could. We obliged to each participant to install the ICS in their own house at least, and if they could install the ICSs in the other's house, they did the promotion and training by themselves. (It started from the ICSIT at ward #4.)

Followings are the number of participants and installed ICSs.

Ward#/Name of Place	Training Period	Participants			Target No. of ICSs	Installed No. of ICSs
		Female	Male	Total		
3 Bayali	Dec. 3- 6 '96	10	0	10	30	18
4 Ramadi	Feb.24-26 '96	11	4	15	More than 15	25
5 Mahj Gaun	Mar.14-16 '96	9	6	15	--	20
7 Thula chour	Mar.20-22 '96	14	1	15	--	25
5 Bakrek	Apr. 7- 9 '96	13	5	18	More than 18	23

III-2 The conditions of promotion and installation of the ICS

(1) In the case of ward#5

The castes composition of the participants of the ICSIT are followings.

Name of Place	Castes / No. of Participants
Majh Gaun	Kunwar / 15
Bakrek	Thapa / 17 , Gurung / 1

The participants of above two training joined them because they just heard the rumor about the ICSIT what had been done at another place, they were not so highly interested .They wanted to involve themselves in Mothers' Group, but they didn't know how they could. They had no experience on development works. Therefore they didn't consider how to promote the ICSs after the training, but did installation of the ICSs in their own houses, or some the other's house who were interested in. They

didn't recommend or promote them purposely. Followings are results of the interview at ward#5.

Advantages of the ICS

- >Cooking time was saved from 5 to 10minutes.
- >Smoke didn't remain in the kitchen any longer after the installation.

Disadvantages of the ICS

- >Cooking time was extended
- >Consumption Firewood was increased for those who failed to make the ICS in proper size, new stove didn't help too much because they also had to use the existing one.

Above mentioned disadvantages were all technical problems when the ICS was not work well, they could be transformed into advantages after repair. I found the lack of understanding of participants, and it was necessary to follow up after the ICSIT. Followings are cases of they couldn't install the ICSs.

- >In Case of straw-thatched house, some people have believed that the roof would catch fire due to the smoke from the chimney pipe. Among such cases, someone has not used the ICS after installation.
- >Some people wanted to install the ICSs after they build their new houses.
- >Busyness of farming

Above mentioned No.1 was a misunderstanding , it should not be, but the others also had no strong intention to urge them to install the ICSs compulsory. While those who hadn't used the ICS after the installation said,"If it was rain, I could cook in the ICS."(30yrs/woman) And some people said No.2and 3 comments, but it seemed that the people who didn't understand about the ICSs very well just excused not to install them.

(2) In the case of Ward#7

The castes composition of the participants of the ICSIT are followings.

Name of place	Castes / No. of Participants
Thulachour	Khatri 9 Thapa 5 Adhikari 1

The participants were members of existing Mothers' Group which had some experiences ,eg; Mandir(Temple)construction.

They promoted the ICSs very actively They taught and promoted the ICS installation in pairs. Due to this they could solve their own problems or misunderstandings. They made the ICSs in the house what women headed faster than the others.

Followings are result of the interview at ward #7.

Advantages of the ICS

- >Cooking time was saved from15–20minutes.
- >Consumption of firewood was decreased(Max.50%)
- >Smoke didn't remain in the kitchen any longer after the installation.

Disadvantages of the ICS—Nothing

Followings are cases of they couldn't install the ICSs

- >Some people who have big family(17–18people) didn't want to make the ICS, because they have believed that the ICS was not capable enough to cook for large number of people.
- >Some people wanted to install the ICSs after they build their new houses.
- >In case of poor people, their houses were too fragile to install the ICSs.

No.3 was very serious problem An interviewee said "We want to make the ICSs in the poor peoples' houses faster, but we can't do so. Because they don't have houses."

The convenience of the ICS is more necessary for poor people to lighten the burdens, fetching water, firewood, etc. But it is difficult to do due to physical reason. Such poor people also might be ashamed of their own houses.

This problem shall be a task to consider in future Reason No.1 and 2 seemed that some people just excused. While the misunderstanding was not find what were ward #5 people had said, namely "A straw-thatched roof might catch fire". On the contrary, they changed shape of the chimney pipe or installation place of for those who were afraid of fire.

By the way, almost people who were using the ICS everyday were sweeping off the soot in the chimney once from 15 to 20 days at both wards, and taking care of ICS system sufficiently.

III-3 Participation of Men and Women in the ICSIT

(1) In case of ward#5

The rates of men's participation of the ICSIT were 40%(majh Gaun) and 12% (Bakrek). These rates were higher than the other places' rates. Followings are replies against our questions on participation of men and women in the ICSIT.

>"If men can join in the ICSIT, it is better because they are good at such works,

designing, installation of the ICS" (20yrs/woman)

>"Women aren't good at the ICS installation. It is difficult to promote to the other people. And they didn't understand the necessities and effects of ICS very well. (45yrs/man)

>"It is not impossible to install and promote the ICSs in the village, but if we can have, it is better than nothing"(50yrs /woman)

(2) In case of ward #7

While in case of #7, rate of men's participation was 6%. Interviewees' comments are followings.

- >“Men's being were helpful to women, but in case of the ICSIT and the promotion, we can do enough without Men's help” (35yrs/woman)
- >“We couldn't rely on Men who hadn't had any interest in the ICSs“ (40yrs/woman)
- >“It was easier that all works had been done by women only.”(40yrs/woman)

It seemed that differences of two groups' comments came from the differences of their experiences they had had before. #5 people said that if they could have men's assistance, it would be better than nothing, while although #7 people have known men's cleverness, they've understood the meaning to manage Mothers Group by themselves. Anyway it was clear that group can do this work (ICSIT) better than individual. And if the group had much experiences and knowledge how to make company with men, they could work very actively, because they got sense of independence from men , and confidence in themselves.

While in case of ward#5, lots of men work away from home, I expected that women live there had high sense of independence very much, but it seemed that women relied on men more than another place. And men were also more cooperative to women than the others. I considered that the reason of such circumstances of ward #5 was caused by lack of many kind of information. Because a lot of men have been going to the other places, and men who live in the village are very old or very young. Almost of them are retired soldiers or teen-agers. And also ward#5 is one of the remote villages from Pokhara in this VDC.

IV. Recommendations for strengthening gender sensitivity for the empowerment of people and sustainable development

IV-1 Property of the ICSIT

In the case of the ICSIT, I could find no obstruction in women's activities by men. I've been considering that some works of the ICSIT should be done by men's selves, because they are good at heavy labor. But I found some points as the propriety and validity that the ICSIT might be done in Mothers Group as follows.

(1) It is necessary to know as a purpose, not only input the knowledge and technics, but also let women realize how they can do, what they can in a program by themselves. Very small experiences and success must bring self confidence and sense of independence in a village society.

The ICSIT is one of the useful programs to have relation with villagers when M/P team start working in a village, and it is usable to formulate users groups because participants' responsibility is not so heavy.

(2) It's not needed men's assistance so much, if the ICSIT and the following up are successful. It's easy to prepare necessary materials in a village, training period is short, and all works are not heavy labor. Therefore new women group can join even

if the member has little experiences. In case of ward #5, they are not working so actively now, M/P team must keep watching for following up.

(3) A group member who have many activities and experiences can achieve not only advantages of the ICS but also leisure, health what would come by using the ICS.

For example, a person who have got a little time caused by it, can consider how to arrange literacy class, Income generating program etc. It can be expected that improvement of peoples' mind on development works. It can be seen our future's task to improve sense on environment.

IV-2 How to arrange the ICSIT ,indicators for evaluation

We have to try to implement the ICSIT paying attention to followings.

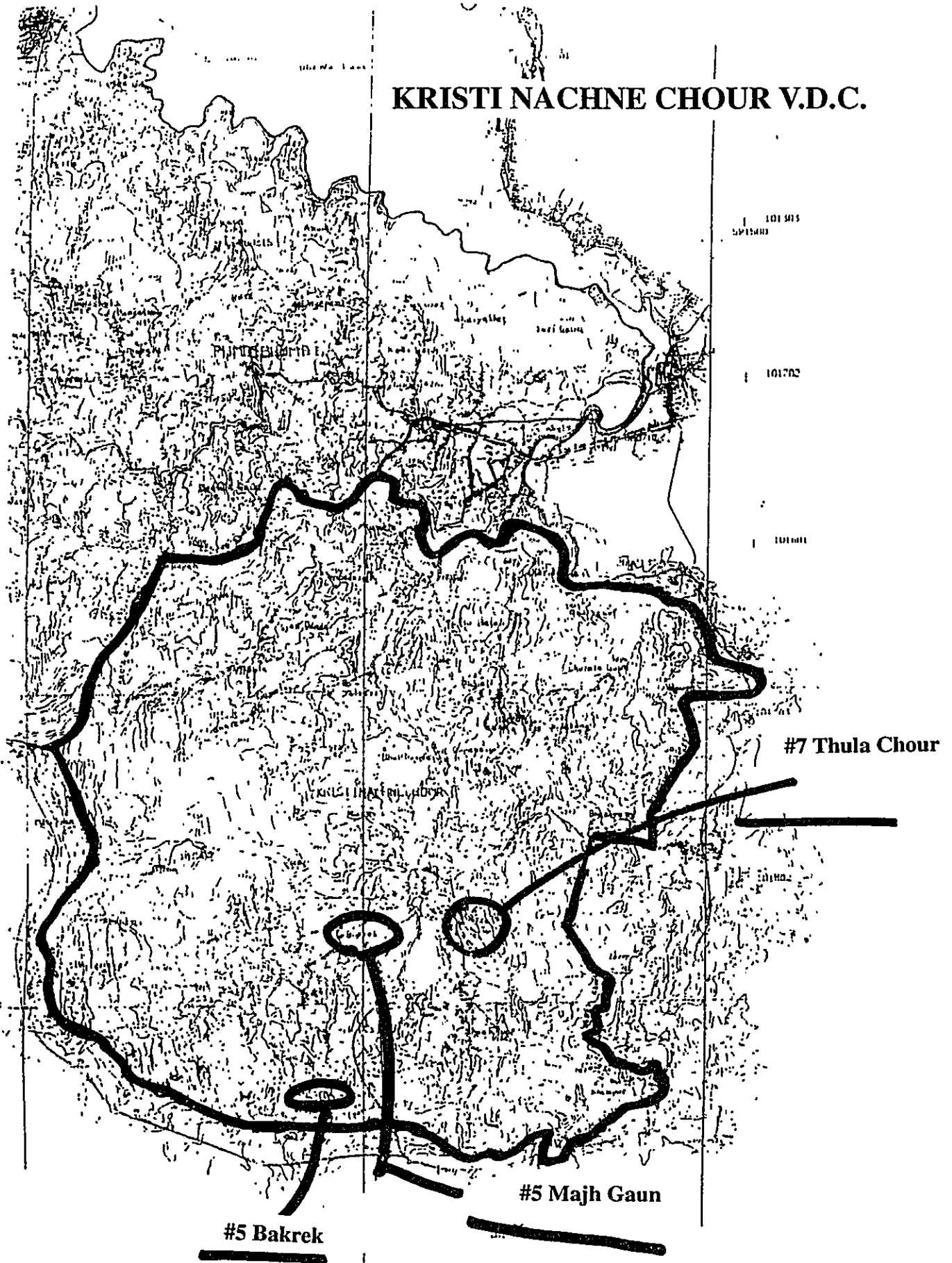
- (1) Arrange the way of promotion site wisely after studying the sense on development or living conditions of participants. -
- (2) Mentioned points as below are usable as indicators for evaluation, if it's possible, we must try them.
 - >Fix the target number of actual used ICSs in that site.
 - >Study the decrement/increment of cooking time in some households.
 - >Study the decrement/increment of consumption of firewood.
 - >Study the number and conditions of repair and maintenance of the ICSs.
- (3) Promote properly and Follow up well for misusing and misunderstanding about the ICSs. Some failed people have been decreasing the ability of the ICS.
- (4) Study how to promote to large households and poor people.

If it's possible, we must show special demonstrations.
- (5) The success or failure can be known using above points.

But on the contrary, if it'll be able to expect the next programs after the ICSIT, it must be done. The ICSIT is valuable not only a kind of promotion training, but also it can be a tool or first step for next development works.

This much is all I have to write as a report.

KRISTI NACHNE CHOUR V.D.C.



Annex : 3 Face Sheet on Sub-projects (2)

Photographs and other information of the Sub-project

Training Schedules are as follows :

*Training at ward # 5 Majh Gaun
Day 1 : Lecture on Improved Stove
How to make, why it is convenient.
Practice of making of chimney pipe (Photo A)*



Photo A

*Day 2 : Practice in the field
Make some samples (Photo B)*



Photo B

Day 3 : Actual Install in some people's house

Annex : 3 Face Sheet on Sub-projects (2)

Photographs and others information of the Sub-project

Training Schedules are follows :

Training at ward # 5 Bakrek

Day 1 : Lecture on Improved Stove (Photo A)

Practice of making of chimney pipe (Photo B)



Photo A

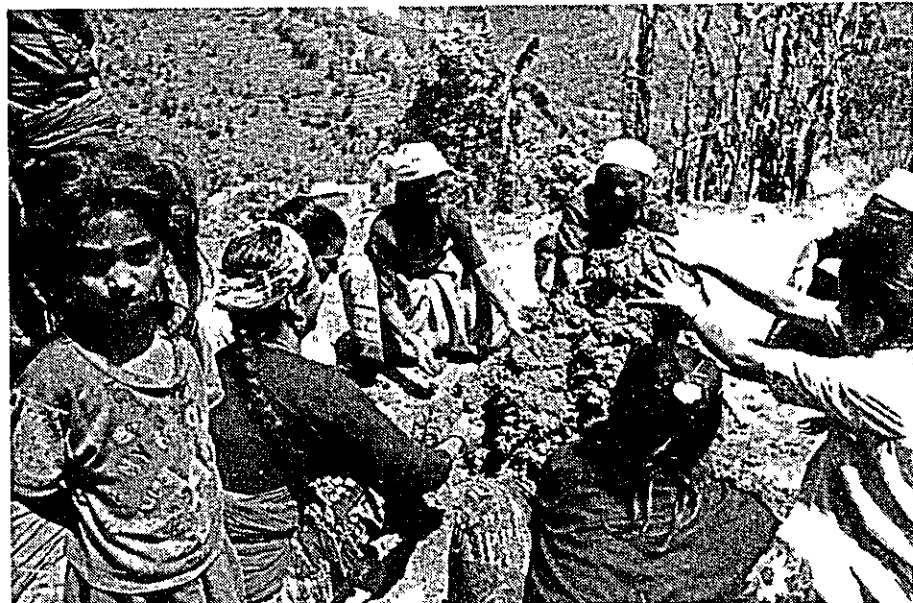


Photo B

Day 2 : Practice in the field, participants make some samples

Day 3 : Actual Installation. Some group make 2 - 3 pcs. install in the some house.

Annex : 3 Face Sheet of Sub-projects (2)

Photographs of others information of the Sub-project

Training Schedules



Photo A

Training at ward # 7 Thulachour

Day 1 : Lecture & Practice of making chimney pipe (Photo A)

Day 2 : Practice in the Field. Make some sample (Photo B)

Day 3 : Actual Installation



Photo B

Japan International Cooperation Agency

**HMG/JICA Community Development & Forest/ Watershed Conservation Project
HMG/JOCV Greenery Promotion Cooperation Project**

Workshop on Gender Sensitivity in
Community Participation
Pokhara
20-25 June 1996

Case Study No. 9

Language : English

Case Study
on
Gully Control in Kristi

Prepared by: Ms. Durga Kharel

Site Office: Kristi

District: Kaski

**Presentation
of
Sourbote Gully Control Sub-Project
in Workshop on Gender Sensitivity in Peoples Participation**

Introduction:

Kristi Nachnechour VDC surrounded by Nirmal Pokhari to East, Syanja District to South and Pumdi-Bumdi and Pokhara to North, is situated in southern part of Kaski District. The VDC has 1016 households with total populations of 6565. The literacy rate of this VDC is very low and does not have development activities.

The major problems of this VDC are trail improvement (Maintenance), river embankment control , toilet and drinking water supply etc.

The M/P team has been working in this VDC since 2 June,1995. JICA/CDFWCP and JOCV/GPCP are the first co-operative donor agency of this VDC. They have been implementing community level sub-projects (CLSP) and inter community level sub-projects (ICLSP). I am going to present the activities of ICLSP i.e. Sourbote Gully Control Sub-Project in the workshop of Gender Sensitivity on Community Participation.. This sub-project is being implemented in between wards No. 7 & 1 of Kristi VDC.

I. Profile of the Wards No. 1 and 7:

(a) Population /Households/Ethnic Composition:

Ward No.	Ethnic Composition	No. of HHs	Population		
			F	M	Total
1	Brahmins, Chhetris,Kamis	83	271	270	541
7	Chhetris,Bramins,	150	400	600	10,00

Sources: VDC Office of Kristi

(b) Literacy:

Ward No.	Level	Female	Male	Total
1	Campus	x	5	5
	S.L.C.	x	13	13
	Read and write	153	170	323
	illiterate	100	100	200

Ward No.	Level	Female	Male	Total
7	Campus	3	4	7
	S.L.C.	2	9	11
	only read and write	103	217	320
	illiterate	362	300	662
				10,00

Sources: VDC Office of Kristi

(c) Economic Situation:

The major occupation of ward No. 7 is agriculture. The major crops are millet, paddy Maize etc. The productivity of agricultural land is very low people and people do not even have enough to eat through out the year. Of the total, 25 Households have joined the army, and civil services, 2 have business, 10 have carpentry, 2 have tailoring and 10 have been doing black smith.

II. Main Activities in the wards:

Ward No. 7 was selected for the first year and ward No. 1 for the second year. In ward No. 7 some sub-projects are being implemented now as listed below:

1. Thulokhola Drinking Water sub-project, Chhapsu wara.
2. Trail Improvement and Gully Control sub-project, Malagini.
3. Improved Stove Installation Training for Mothers group, Thulachour.
4. Study Tour about Forest/Watershed Conservation.

Other details are given in Annex- 3 : Face sheet of the sub-projects.

III. Gender Sensitivity : Efforts and Insights:

HMG/JICA, Community Development, Forest/Watershed Conservation Project and HMG/JOCV, Greenery Promotion Co-operation Project have focused on female's participation in planning and implementation of sub-projects. The M/P team arranged a meeting to discuss with the communities about planning, requesting the sub-projects to be carried out. In the meeting the M/P team tried to make female and occupational caste come forward for income generating and other community level sub-projects, which are listed below.

1. At the time of information dissemination, females can make groups for income generation, planning.
2. Before implementation of sub-projects, it is necessary to meet with female groups such as Active mothers group and discuss about gender sensitivity so that they can motivate other females.
3. Give advise to the key persons and ward chairperson about women's involvement in any ward level programme.
4. The M/P team should wear simple clothes when they go to the community meeting.
5. Do not behave differently with male and female in any activities of the communities.
6. Set up female group prior to the meeting.
7. Nepal is a male dominated country. The male do not understand about women development activities, gender sensitivity. Women can not go to the meeting without the permission of male and can not participate in decision making, planning etc. Therefore, this issue should be realized by both male and female.

It is very necessary in the community for both males and females to participate in the process of planning and implementation.

IV. Major Problems and Obstacles Encountered:

In ward No. 7, Thulachour, the M/P team held a meeting in the beginning for inter-community level sub-projects, in which the females attendance were very low. And those females present also sat at the backside of the meeting. When the M/P team asked the women about it, they replied that they can not read and write, so they do not know any thing and were shy to talk. They did not come for the meeting on time, male & female did not sit together. Male were not listening to what female were talking, so we gave some advise in this regard. During the meeting time most of the women were thinking about their family. It was the main problem faced in the meeting of ward No.7, where as in the case of ward No. 1 nobody came to the meeting.

The major reasons for the problems encountered:

1. Only male attended the meeting and other community development activities such as decision making, planning, implementation monitoring & evaluation of Projects. All those time they did not involve the women, so even the interested women were not active in the meeting.
2. Women are mostly busy in their house works such as cooking, fetching water, taking care of child, collection of fuelwood, and agricultural works, so they do not have enough time to attend meeting.
3. Social reasons:
Females can not talk freely and openly to their husband, brother in-law, father in-law. It is a social obstacle to development activity.
4. Lack of Education:
Not able to understand about the importance of equal participation of male and female in the sub-project's identification, decision making, planning and implementation.
5. Male Domination:
If women says any thing in the group, male do not believe them and say that they would do every thing themselves, because of such attitude female are unable to come forward.
6. Because of this problems, we met the groups separately to discuss the process of Project programming for sustainable development.
7. Only 5 to 6 house holds from Ward No. 1 attended the meeting, but the participants said that they would come to join the work later.

Due to the above stated problems a number of meetings were conducted separately. Personal contact was also done. In the meeting, the M/P team encouraged them to participate in development activities for their own benefit. The M/P team also informed that the Project can provide technical assistance as required. The HMG/JICA Operational Guidelines was also discussed with the villagers. Joint meeting was also conducted for the people of Ward No. 1 & 7.

A meeting on Sourbote Gully Control was organized once again after personal visit and meeting among the member of the women users' group. In this meeting, there were 2/3rd participation of the beneficiaries including both male and female. But there were not more than 5-6 people from Ward No. 1. The villagers expressed their feeling that they can not contribute labour as required because of their hand to mouth problem, so the M/P team tried to convince the users group everyday saying that the project belongs to them and they are the real beneficiaries.

The participants of the study tour organized by DSCO (users' group Secretary and other women) raised their voice to implement this sub-project. Consequently, the agreement was signed between HMG/JICA and users' group. Of the total 77 Hhs beneficiary, there were 28% women headed HHs. The number of the women are 233 and men 229 of the total population. The users' committee of this sub-project consists of 11 members with 4 women.

Until now, there are 19 completed checkdams, 105 meter dry stone fence, and plantation of Broom and Napier grass. The transportation of gabion wire, Napier grass and broom grass was done by both male and female. Women transported stone for 19 gabion boxes and fencing.

At present the construction of brushwood checkdam and plantation is underway. Of the total contribution, women shared 65% of it as reported by the users' committee.

Thus, with the effort of M/P team, the users' group is in the process of demanding other sub-projects too. In decision making process, the male encouraged female to participate actively in the project.

One of the reason regarding the active participation in the formulation and implementation of this sub-project was study tour. The M/P team organized study tour for the users' group members. There was equal participation of both male and female. This study tour encouraged them to utilize their unused land to generate some income from it.

Since this project is bigger in both size and cost, the progress can be made through peoples participation approach which would be an example for the other wards.

Recommendations for Strengthening Gender Sensitivity for Empowerment of people and Sustained Development :

1. Qualified field staff should be built up through the gender sensitivity related training/workshop
2. Planning, peoples participation, and work plan are needed to involve the female for easy planning of time and empowerment of female in the locality. Because all the females in the community are busy with their household works, collection of fuelwood from the forest.
3. Equal participation of both male and female should be compulsory in decision making implementation etc. of projects.
4. Organize literacy programme for awareness building of women. Since the women can not read, write and speak, the literacy class may be quite useful for them. Additional materials also should be included to reflect the project objectives.

5. Posters should be developed as a tool for communication. as both the male and female may not understand the lecture.
6. Operation and maintenance training should be provided for both, the active male and female for sustainability of the sub-project.
7. Women and occupational caste should be encouraged to establish fund in their group. This fund can be utilized for the development purpose. If they want to deposit this fund in bank, the project should assist them.
8. There should be interaction with other successful women groups and study tour should be organized in the respective field so as to convince them for their positive attitude and solidarity. The study tour and training can enhance their knowledge and skill.
9. Gender sensitivity training should be provided to the village male too. Until and unless the male do not understand the role and responsibility of female in planning and implementation of the sub-project, the women can not go ahead due to the male dominated society.
10. Film or video shows related to leadership development should be organized for the occupational caste and women.

Gender Sensitivity Monitoring Indicators:

Record Keeping:

- Maintain minute of each and every meeting to know the presence of users' group in the meeting, decision taken, action taken by the occupational caste and women.
- Keep record by the project staff regarding the work as done by the occupational caste and women.
- Assign users' to keep records regarding the number of meeting, participation of women in meeting, and decision made so as to know about the women participation in the sub-project.

Annex 3. Face Sheet of Sub-project (1)

Date: 5 June, 1996

No.: 1

1. Title of Subproject: Sourbote Gully Control	
2. Location: Thulachaur, Ammbote	Ward No.: 17 VDC: Kristi Nachne Chour
3. Total Cost: Rs. 519912.92	(100 %) 6. Approved Date: 16 Jan., 1996
4. HMG/JICA: Rs. 268261.31	(49.15 %) 7. Starting Date: 24 Jan, 1996
5. User Group: Rs. 264425.92	(50.85 %) 8. Completion Date: Continuous
9. Total No. of Benefited Households: 77	(Schedule Castes : 3 HHs.)
10. Total No. of User Group Committee Members: 11	(Female: 4 Male: 7)
11. Total No. of User Group Members: 462	(F: 233 M: 229) (SC : 10)
12. Summary of the Sub-projects: (Objectives, Main Activities, Methodology, Problems and Obstacles encountered Monitoring, Maintenance, Sustainability, etc.	
Objective:	To protect the agricultural land, settlement, irrigation canal and water resources from being destroyed.
Main Activities:	Construct the Gabon checkdam, brushwood checkdam, different types of tree and grass plantation, fence etc.
Methodology:	Community Participatory approach and HMG/JICA/JOCV i) Participatory approach : Local material collection and material transportation and unskilled labour are born by users' group. ii) Project Side: Provide material such as, G. Wire, plant tree and grass, skill labour and technical support.
Problems and Obstacles:	
D) Later two group did not agree to work together but only some houses of ward No. 1 worked.	
II) Gabion wire was not of good quality and even the skilled labour could not knit gabion boxes of the same size.	
III) In the beginning , women were very less present in the meeting.	
IV) In the beginning of the work only committee member were present for one month.	
13. Community Participation: Total unskilled labour born by the users' group such as stone, plant, gabion wire transportation etc.	
14. Gender Consideration: Male and female participated in the construction work in the proportion of 35% and 65%.	
15. Environmental Consideration: It will help to control soil erosion and protect settlement, agricultural land and water resources from being damaged.	

Japan International Cooperation Agency

**HMG/JICA Community Development & Forest/ Watershed Conservation Project
HMG/JOCV Greenery Promotion Cooperation Project**

Workshop on Gender Sensitivity in
Community Participation
Pokhara
20-25 June 1996

Case Study No. 10

Language : English

**Case Study
on
Mushroom Cultivation in Mauja**

Prepared by: Ms. Hana Kobayashi

Site Office: Mauja

District: Kaski

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Introduction

For the paper presentation for the Workshop on Gender Sensitivity in Community Participation, I have selected mushroom cultivation operated in ward no 7, 8 and 9 in Mauja VDC, Kaski district. Since this sub-project is one of my favorite, the M/P team has been putting a lot of effort to make this sub-project successful, which I would like to present it in this Workshop

I. Profile of the Wards No.7, 8 and 9

Ward no.7,8 and 9 are located in western part of Mauja VDC, at the border of Arba Bijaya VDC and Vulum VDC (see Annex 1.). Ward no.7 is divided into two parts: Bishuna, (Brahmin village) and Dadagaun, (Gurung village). Bishuna and Dadagaun are one hour apart on foot from each other. Dadagaun was formerly Bijaya VDC but was joined with Bishuna, when the readjusting of the administrative division had been carried out by the government. Ward no.8 is the smallest ward in Mauja VDC. This ward was damaged by Gaiswaro landslide 30years ago and most of the villagers moved to other wards and Pokhara. Ward no.9 is the second smallest village in Mauja VDC. However, the villagers have strong tie with each other.

The economic situations of these three villages are about average compared with other wards in Mauja VDC. Main source of income in these villages are the foreign remittances sent by those who are working in army or foreign countries such as Hong Kong, Malaysia and Saudi Arabia Formerly, Brahmin and occupational castes did not go out of the villages to earn money. However, from about 8-10 years ago some agencies started a business to send Nepalese to foreign countries to work That opened the door to other caste who were not used to go out of the country to earn money Main socio-economic situations of these three wards are described in Table 1.

Table 1 Socio-economic Situations of Ward no.7,8 and 9¹

Ward no	Name of the Ward	Major ethnic composition	no of HH	O/C	Total Population	Literacy rate		Sex	Age Groups (years old)						Total Migrants
						female	Male		0-10	11-20	21-40	41-60	Over 60		
7	Bishuna	Brahmin and Kami	49	16.3%	259	56%	89.4%	F	30	29	37	19	3	118	88%
									43	27	44	26	1		
	Dadagaun	Gunung	20	0%	122			F	14	10	16	11	5	56	4.1%
									15	14	22	6	9		
8	Gairigaun	Gunung and Kami	16	6.3%	90	100%	100%	F	6	12	13	8	3	42	12.2%
									10	10	13	9	6		
9	Imdupaka	Gunung, Brahmin and Kami	21	14.3%	137	71.4%	94.1%	F	22	11	24	6	7	70	8.0%
									13	15	24	12	3		

¹-All migrants are male.

-Migrants are also included in the total population.

-O/C: Occupational caste, such as Kami, Damai and Sarki.

II. Main Activities in the Wards No. 7, 8 and 9

There have been five sub-projects implemented in these three wards. (1) In Ward no.7, Dadagaun, people have been constructing a trail, 80% of which work has been completed. (2) Bishuna people have been constructing a trail under Inter-community Programme(II). (3) In Ward no.8, the villagers have been also constructing a trail of about 900m long, 1/3 of which work has been finished. (4) In Ward no.9, villagers have finished constructing the trail of 503m long. Even though they did not have good stones near by, they tried their best to construct first-class trail by carrying stones from far away. Their work is neat and clean.(This case will be presented by Local Volunteer of Mauja Site Office) (5) There is a school building maintenance sub-project jointly implemented by ward no.7,8 and 9. Since the students of these three wards(except Dadagaun)go to this school, they have decided to maintain it jointly. All works have been already finished.

Besides the above-mentioned sub-projects, the M/P team organized a training on improved stove, gobar gas information dissemination programme and income-generation programme on mushroom cultivation. The details of the sub-projects are shown in Annex 3. and Annex 4.

III. Gender Sensitivity: Efforts and Insights:

a)Background of the Sub-project on mushroom cultivation

In November 1995, the M/P team operated micro-baseline survey in the selected five wards, namely, ward no.3,5,7,8 and 9. From the survey the M/P team found out that there had been no major income-generating activities taking place in Mauja VDC. Moreover, the villagers did not have any idea about income-generating activities. From the demands of villagers, the M/P team operated four-days study tour from 29

January to February 1996, focusing on income-generating activities. The objectives of the tour was to make villagers get familiar with income-generating activities by visiting model places.

20 motivated villagers (10-females and 10-males including 2-occupational castes) from the selected five wards were invited to the tour and visited farmers who had been practicing bee keeping, seed production, sewing and knitting, bamboo handicrafts, mushroom cultivation, etc, in and around Pokhara. On the last day of the tour, the participants discussed about feasible activities to be undertaken in Mauja and decided that ward no.3 and 5 will do the Pole bean seed production and ward no. 7, 8 and 9 will do the mushroom cultivation and each group formed the users' group.

Users' group of mushroom cultivation decided by themselves to collect Rs.100 per member to buy spawn, and demanded the M/P team to conduct a training.

On 28 February 1996 Local Volunteer of Mauja Site Office, prepared the work plan for the mushroom cultivation (see Annex2.) which was approved by JOCV team leader. According to the work plan the M/P team conducted a mushroom training on 15 March 1996 inviting Agriculture Development Officer, as a resource person.

Users' group of mushroom cultivation and other interested villagers have learned what mushroom cultivation should be in theory and practice. After training, users' group divided 8 bottles of spawn among the users group members and did their first sowing on 19 March 1996.

First harvesting was done on 10 April 1996. Ward no.7 harvested about 2kg, Ward no.8 . 3kg and ward no.9. 2.5kg of mushrooms from 2 bottles. Second sowing was done on 1 May 1996 and third on 28 May 1996. They are expected to be harvested around end of May and end of June 1996, respectively.

b) Process of mushroom cultivation

Before discussing further, I would like to explain the methods of mushroom cultivation (see Annex 5.) and the role of female and male in the process of mushroom cultivation. (see table 2.)

c) Conditions for mushroom cultivation

Regarding the gender sensitivity, the M/P team thought four major issues to be considered before implementing the mushroom cultivation.

Firstly, we need to understand the socio-economic situations of the wards surrounding both men and women. Since most of the young men in Mauja VDC go out of the village to earn money, there are only old grandparents, women and children remaining in the villages. For example, according to our survey, there are only 6 young men between the age 18 and 40 living in the Ward no.8. Therefore, most of the house chores, field work, cutting firewood and bringing up children, which are usually shared by husband or father, are mostly done by women (wife, daughter and daughter-in-law). From the situation of the women, we thought that whatever income-generation activities they demand, it should not increase the burden of women. In fact, when we asked whether goat raising is feasible in Ward no.8, the women immediately said "Impossible, because we do not have time to gather fodder." As mushroom cultivation is concerned, the M/P team thought as it is described in the process of mushroom cultivation, the hardest process is done by male. Female's role after sowing are just watering the straw balls and harvesting. From the capacity of the amount villager can cultivate, it would not increase the burden of women. Therefore, mushroom cultivation may be feasible considering the socio-economic situations of the wards.

Table 2 Main Roles of Female and Male

Process	Work done by	Reason of the role
1)Cutting straw	Female/Male	Large quantities of straws were needed for cultivation. Because cutting straws was a simple work, this process was shared by both female and male.
2)Steaming straw	Male	In Gurung culture, carrying heavy things and cooking in a big container are the work of male. For example, during wedding, “Argun” ² and big parties, male cuts the vegetables, butches the water buffalo, cook dal bhat and serves. Female’s role during those occasions are to serve tea, alcohol and roti. ³
3)Laying straws and spawns in plastics	Female/Male	This process was very easy so it was done by both female and male.
4)Watering the straw balls	Female/Male	If cultivation is done in large scale it will be impossible for just women to do it . However, in the recent situation, it was one bucket of water a time, so it was a role of female since they stayed at home more than male.
5)Harvesting the mushroom	Female/Male	Traditionally, in Gurung culture, harvesting the crops are done by both female and male but when they carry the crops it will be the role of male since it is heavy. Because mushroom is not heavy both female and male did it.

² Funeral of the Gurung.

³ Doughnut.

Secondly, we thought that in order to empower women we should also empower men at the same time. Whatever work it is, men also need to have a knowledge and understand about it. We realized that when we did the improved stove training. Even though cooking is mainly women's work, we can not just motivate women to make an improved stove. Improved stove which we introduced were a little different from that of usual improved stove. It was made of stones so it was stronger than others, which enabled Gurungs to make an alcohol in the same stove. To install this stove they needed to gather big stone and cut two holes(see Annex 6-1). Cutting stones were recognized as a work of male in our village. So from the results of the monitoring of improved stove installation, we found out that stoves made by both men and women together were working better than those made just women or men alone. Therefore, while selecting the participants of the study tour, we requested that there should be 50% women and 50% men from each Ward. From the present situation of mushroom cultivation, I also feel the importance of empowering both women and men. Out of 12 members, only 4 members are still cultivating mushrooms. Those members are the ones who have been working jointly or had a helping hand from the family members. For the sustainable project, I feel both men and women should be equally involved in the activities, otherwise, it will be hard to implement just by women or by men.(Detailed analysis of success and failure cases will be discussed in the next chapter.)

Thirdly, we thought that there should be a maximum use of local materials. Traditionally, there used to be "Bangra"⁴ and "Kamal"⁵ weaving done by women in Mauja. However, the number of women weaving have been decreasing these days.

⁴ A bag for Gurung male.

⁵ Woolen blanket.

The main reason is that needs of those traditional goods have been decreased, and at the same time, they have to purchase materials from Pokhara or from other VDCs, which had been difficult. They used to raise sheep until 10 years ago so that they could produce “Kamal” by themselves. However, since the children who used to take care of sheep go to school these days, villagers are not able to raise sheep anymore. These days, the women have to buy wool from outside, which cost about Rs.200. Most of the women decided not to buy the wool because even though they weave for few weeks they just can get Rs.350, which is not worth at all. In the case of mushroom cultivation, except spawn and plastic bags all the materials can be found in the village. If we try to maximize the use of local materials, it will decrease the extra work of villagers to go and buy materials from outside, which will increase the possibility of sub-project to survive.

Fourthly, we should consider the cultural values of the villagers. The Gurungs consider selling things by “doko”⁶ as an act of shame. However, they do not consider an act of shame when selling “Bangra” because “Bangra” fits in small bad and they just need to bring it to the store and sell it. They dislike the act that has to carry “doko”, since “doko” symbolizes “underprivileged villagers who are very poor”. In the case of mushroom, since it can be put into plastic bag and carry easily it does not obstruct their cultural values.

IV. Major Problems and Obstacles Encountered:

Major problems that the M/P team has faced with mushroom cultivation were as follows:

⁶ Basket to carry heavy things.

1) Shortage of clean straw to cultivate.

This problem occurred because villagers usually harvest paddy in December but we operated study tour in the end of January and training in March. They were not expecting to cultivate mushroom in December so they could not keep the clean straw in advance.

2) Lack of knowledge to judge whether spawns are germinative or not.

The M/P team arranged to bring spawns for 4 times. However, the conditions of the spawns that arrived from Nepal Agriculture Research Council were always different (see Annex 6-2). Spawns are very sensitive and are easily damaged. Since conditions of the spawns in first cultivation and second cultivation were very different, many villagers thought spawns were damaged and did not sow, which they discovered later that they were not damaged.

In order to get further information about the problems and obstacles encountered during mushroom cultivation, I have interviewed 12 Users' Group members (see Annex 7 for individual socio-economic background.), according to the questionnaires as shown in Annex 8. From the result, (see Annex 9) general impression of mushroom cultivation was that they all liked it and thought it was successful for the first time. Most of them wished to keep on doing it next year in larger scale so that they can get some income from it.

Interesting to note was that some members cultivated individually and others in groups according to the settlement. Cases are as below:

[Individual] (A) Ward no 7 Bishuna : 2 Females and 2 Males cultivated in 4 places

[Group] (B) Ward no.7 Dadagaun : 2 Female and 1 Male cultivated in 1 place

Ward no.8 Gairigaun . 2 Females and 1 Male cultivated in 1 place

(C) Ward no.9 Imdupaka : 3 Males cultivated in 1 place

The reasons why (A) decided to work individually were because they lived apart from each other and wished to work in their own houses which they thought would be easier. On the other hand, (B) and (C) decided to work in groups because they lived close to each other and thought it would be convenient to work together since it was their first time to cultivate.

The reason why (C) has only male members was because female participant who was supposed to participate in the study tour could not attend due to personal reasons and males attended instead of women.

Actually, (B) Dadagaun added 2 other male villagers in the settlement to their group to work together.

From the survey I found out that members that cultivated in a group consisting of both female and male harvested more than others. I would like to examine how these differences occurred (see Table 3).

First of all, when comparing (A) and (B), the advantages of (B) as working in a group were found as follows:

1) They were able to share the ideas among the members.

For example, according to the ways placing the straw balls they discovered that the amount of mushroom harvested were different. Members exchanged their ideas and came up with the unanimous view that hanging straw balls were most effective.

2) They were able to save time by working together or in turn.

Even though it took only 10-30 minutes to water straw balls each time, it was hard to return home just to water it when working in the field or cutting

Table 3 The Ways the Users' Groups Solved The Problems

Problems and obstacles encountered	(A) Bishuna (Individual)	(B) Dadagaun and Gairigaun (Female/Male)	(C) Imdupaka (Male only)
(1)They did not have a space to cultivate mushroom.	They cultivated under their beds which were not appropriate places to cultivate. Only 2 members were able to harvest.	They decided to work jointly. Whoever had a place to cultivate offered to other members.	They also decided to work jointly. However , the place was not so appropriate for cultivation.
(2)They did not have a straw to cultivate.	3 out of 4 members decided not to cultivate anymore.	Since some of the members still had a straw, they gave it to the group. They also decided to cultivate with wheat hay which was still available.	They decided not to cultivate anymore.
(3)There were not enough human resources	3 out of 4 members had a problems of human resources. They said because there were no human resources in their family, it was hard to give water, which made them unable to harvest.	Sowing is the hardest work in cultivating, so on the day of sowing all members worked together. They decided to keep water in big Gurung water-jug so whoever had time to give water came and took care. When problems occurred they talked together .	All 3 members helped on the day of sowing but watering was the work of the leader. When leader was out, his wife took part of him Other members did not go to help him
(4)They could not judge whether mushroom cultures are germinative or not.	They did not operated the second sowing so this problem did not occur.	They decided to sow because it may grow and wanted to learn what kinds of mushroom culture are not germinative.	They did not sow.
(5)They did not have a big container to steam the straw.	They did with their small container, which was hard to steam.	They borrowed from community kitchen utensils of mothers group.	Whoever had a big container offered to other members.

firewood. By working in a group they could help each other according to their schedule.

3)They were able to save money by dividing the expenses within the group.

Spawns cost Rs.20-22 per bottle. It is not so expensive, but when divided among members it will be cheaper. Next year most of them are planning to cultivate 3-10 bottles a time, which will be a quite an expense after sowing for 5-6 times. Also, they will need to buy several tools, so that they can work easier next year.

4)They did not have to buy many tools since members had brought whatever they had from her/his belongings.

Usually, biggest container in average family is "Taulo"⁷, but if they steam with it, it takes many hours since it can only steam 2-3kg of straw at a time. (A) kept on steaming with it while (B) and (C) steamed with "Handa"⁸ or big container belonging to mothers group which they could steam 5-6kg at a time. By sharing their tools it saved their time to steam.

5)They were able to solve problems together.

There are not many houses in the village that have an extra room just to cultivate mushroom. All the members claimed about problem of space. However, if they do not place in dark, clean and well ventilated place where people do not live, it is easily infected by bacterium. Group (B) Dadagaun decided to cultivate in vacant house in their settlement. By discussing together, they were able to solve the problem.

⁷ Container to cook food for water buffalo.

⁸ Container to make alcohol.

Both (A) and (B) faced the same problems, but (A) tried to solve problems by themselves, while (B) tried to solve in a group. It was easy for the M/P team to monitor (B) since we did not have to meet individual members to ask for her/ his problems. The group(B) enabled us to give more advice to them to solve the problems and as a result, they harvested more.

Secondly, while comparing (B) and (C), the advantages of working together with both female and male were found as follows:

1)Female were able to take part of male while male were absent.

In the recent situations of the village, male has more social activities such as users' group meeting, wedding and funeral than female that they are invited.(Gurung's ceremony sometimes takes 3-4 days) So during their absence female members were able to take care of it. Since in Nepal, females usually do not go out and stay away for many days, while males do.

2)It was impossible to steam the straw just by female.

As explained in previous chapter, when steaming 5 kg of straw with 50 liters of water, it is impossible just by single women to carry it to the fire, steam it and drain. Males are also regarding this process as the role of males. In fact, 2 female members of (A) answered that they will work together next year since it was hard to do by themselves.

Even though, both (B) and (C) worked in group, (C)decide not to do anymore, this year where (B) decided to keep on cultivating. The main reasons for (B) to continue were found as follows:

- 1)Members have close contact to each other and are very eager to cultivate.
- 2)Leaders of the group are very supportive and has a leadership ability.

3)Members of the group are very supportive, they have their own rules in the group such as, every member should work on the day of sowing and each member should watering as much as possible.

4)They shared what they needed for cultivation such as straw, container and place to cultivate.

5)Female took place of male when they were not able to work.

Therefore, out of 12 members, 4 members (1 male from (A), 1 female and 1 male from (B) Dadagaun and 1 female from (B) Girygaun)⁹ are still cultivating the rest of the members are not able to cultivate this year because of the shortage of straw. However, they will all try again next year, keeping in their minds the problems occurred during this year so that they do not have to repeat the same mistakes as this year.

V. Recommendations for Strengthening Gender Sensitivity for the Empowerment of People and Sustainable Development:

It can be considered that in the second-year's operation and in future, there are five issues to be carefully examined.

Firstly, the members have just cultivated mushrooms for experiment and ate them all by themselves. For the next year, they need to cultivate more mushrooms so that they can earn money. In order to earn money they will need a market. There is a list of several stores that are willing to buy mushrooms from them. However, the leader of (B) Dadagaun said that as mushroom would not grow at the same time, if cultivated individually, we might not be able to harvest enough. In order to sell in a bulk, we should organize a mushroom cooperative association so that we can grow and collect

together and sell them in lump sum, which will also make them easy to go over the problems. I also agree with his idea, but think that it will be the hardest process since they have never done it before. In the managing process of the work, I believe there will be a lot of problems but I hope female and male can solve the problems together by supporting each other.

Secondly, in the organizing the sub-project, the M/P team tried to minimize what can be offered to them. All Materials, except spawns were provided by the Users' Group themselves. What the M/P team did for them was just bring the spawns from Nepal Agriculture Research Council in Kathmandu. The cost of spawns were also borne by the fund of Users' Group. For next year, I hope they can arrange to get spawns by themselves that it would not be a problem for them to continue cultivation even after the M/P team is gone. Since it is very hard for the villagers to go to Kathmandu just to get spawns the M/P team is thinking to request Nepal Agriculture Research Council to send the spawn with bus as users' group request, so that whoever is going to Pokhara can get the spawns from the bus park. This kind of self arrangement is a key for sustainability.

Thirdly, the members should try to arrange good environment to cultivate mushroom. At least 100 kg of straw, well-ventilated clean room and clean water are needed to cultivate mushroom. These things can not be prepared immediately, so I suggest them to make a plan so that they will not have a same problems as this year.

Fourthly, the Users' Group needs to purchase several tools such as big container, straw cutter and pipe to water, so that it will make both female and male easier to cultivate

⁹ 1 male from(A) and 1 female from (B) has a helping had from the family members

Fifthly, the members need more knowledge about mushroom cultivation. So far, they have no idea of what kinds of seeds are germinative and which are not. Sometimes harvested mushrooms were infected by vermin. Previously, since its production was mainly for their home use they did not pay much attention to it. However, if they plan to sell them, they should not be infected by vermin. Before sowing the culture next year, a study tour to Nepal Agriculture Research Council or some training should be prepared in this regard.

Through this sub-project, I feel members have empowered a lot. For example, formerly they use to say “What will HMG/JICA/JOCV do for us” or “What are you going to give us”. Their attitude was passive. Nowadays, members come far from the settlement to the office saying “We are going to cultivate so please come and see it”. They found out that it is not HMG/JICA/JOCV that do for them but themselves who must do the work.

Especially, members of (B) Dadagaun showed extensive change. Changes were found as follows:

- 1) They have learned the advantages of working men and female together.
- 2) They have learned to plan, share and solve the problems in a group.
- 3) They have learned to think the best way to cultivate by themselves
- 4) Attitude to challenge to new things were seen.¹⁰
- 5) Capacity developed to be able to think about the future.
- 6) Attitude to learn new things by themselves.¹¹

¹⁰ When the M/P team asked them whether they are interested to grow pole bean to sell seeds, they said “yes”, which other settlement said “no”.

¹¹ The leader of this group decided to visit Nepal Agriculture Research Council by himself to learn more things about mushroom cultivation.

If this group did not work actively, I feel members would have said “Mushroom cultivation is very hard and we can not do it” and gave it up as they used to do. However, this group proved that mushroom cultivation is feasible in Mauja if they work hard.

Since the article of “Mushroom Cultivation in Mauja” was published in “Janman”(Annex 10.) ,local newspaper of Pokhara, villagers from other wards and VDCs also came to see their work, which made members feel proud of their work. I hope through their activity people will learn not only the technique of mushroom cultivation but the way they are supporting each other.

For the second year’s operation and in the future, several indicators should be developed. Indicators are shown as follows:

[Indicators on Sustainability]

- People’s interest, initiatives and motivation
- Collective work and sharing the work among men and women
- Social and gender equality in decision-making process
- Collective planning for the activities to be carried out
- Collective problem solving, rather than individual action
- Sharing the expenses in a group
- Not imposing extra burden on women
- Not interfering cultural values of the people
- Maximum utilization of locally available materials
- Minimum inputs by the M/P team
- Attitude to learn from the failure and try again
- Developed capacity to arrange necessary inputs and marketing by themselves

- Willingness to obtain clear and better knowledge and skills
- Willingness to put initial fund or investment by themselves
- Leadership developed among concerned members
- Sense of responsibility and sharing developed through the activities
- Capacity developed to be able to think about the future
- Capacity to add more members to the Users' group

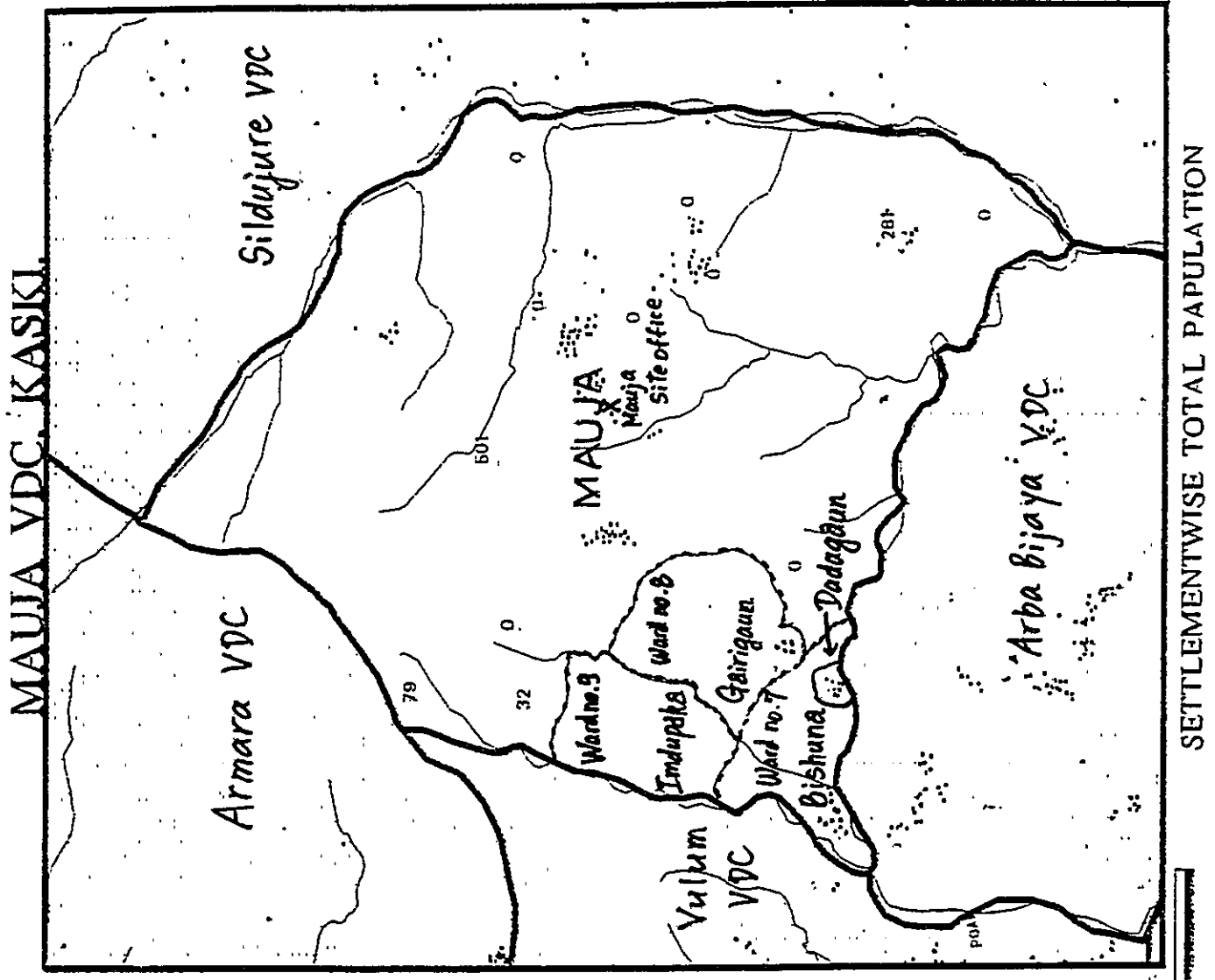
[Indicators on Empowerment]

- Developed capacity to arrange necessary inputs and marketing by themselves
- Willingness to obtain clear and better knowledge and skills
- Willingness to put initial fund or investment by themselves
- Leadership developed among concerned members
- Self arrangement of the sub-project
- Collective work and sharing the work among men and women
- Social /Gender equality in decision-making process
- Attitude to learn from the failure and try again
- Sense of responsibility and sharing developed through the activities
- Capacity developed to be able to think about the future
- Capacity developed to challenge to new things
- Capacity to add more members to the User's group

Finally, whatever sub-project it is, it seems very easy when observing the work others are doing. Mushroom cultivation also seemed easy before operating. However, people recognized how hard it was after doing by themselves. For those

villagers who are planning to cultivate mushroom, I would like to advice as said in the Nepalese proverb, "Only after hard work will come the happiness".

Annex 1 : Map of Mauja



Annex 2. Work Plan for the Mushroom Farming

Date 28 February 1996

To
Mr Hironobu Shiwachi,
Team Leader.
HMG/JOCV GPCP,
Ratnachowk, Pokhara

Subject : Work plan for the (Vaister) Mushroom Farming

Dear Sir.

As discussed with you on 27 February 1996 Please find attached here with the Mushroom Farming and work plan Thank you for your co-operation

Sincerely Yours,



Dharm Raj Gupta,
M/P Team,
Site Office Mauja

UGは10名です。
必需品はすべてUG負担。
年3回トレーニングを行います。

VAISTER (MUSHROOM) FARMING

1. Introduction :

Vaister is one kind of mushroom found in Nepal in wild stage. In beginning there were no farming method but by some scientific approaches developed the farming process for vaister. For the farming of vaister Chemical fertilizer is not used. Straws of wheat, rice or maize are used in the farming. A lay man can culture the vaister because it is easy to maintain the prerequisite and so earn his living.

2. Climate :

The Farming of vaister can be done successfully where temperature is 20-30 °c and humidity 80 % . It grows at 800m to 1400m altitude.

3. Seeding time :

In mid hill region it can be cultured from March to November.

4. Necessary materials for farming :

1.	Dry straw	10 kg
2.	Culture (seed)	2 bottles
3.	Plastic bags (size 12" x 18")	10 number
4.	Chaff-cutter	1
5.	Water heating pot	1
6.	Drum	1
7.	String
8.	Fuel

5. Method :

Cultivation of vaister needs fresh dry straw. It is cut in 2" size and dipped in water for two hours. Then the wet straw is washed in drum. Now let it drain the water from the straw. The bottom of the drum is filled with water and a wire net is put on it to exclude the straw from water. Then it is boiled for 30 minutes to disinfect the straw. Then the small holes are made in plastic bags at 10 cm difference. Now straw and culture are put in bag in layers (one layer straw, then culture, again straw and culture...) Bags full of straw and culture are tied in mouth and put in dark place for three weeks. The spores germinate in three weeks and white layers or fungus are seen. The plastic bags are torn with help of a blade or a sharp knife and materials of bags are sprayed on a wooden sheet. Then after, it is watered 2-3 times in a day. After 4 days small buds of mushrooms are seen and then after 3 days it becomes able to harvest. It is harvested with help of blade or knife. After 7 to 10 days period of the time first and second harvesting can be done. In this way, one crop is complete in 65 to 90 days for commercial point of view three harvestings can be done in the same time.

6. Places where culture becomes available :

- a. District Agricultural Development Office, Pokhara, Kaski
- b. Mushroom Production and Development Programme, Khumaltar, Lalitpur

(1) WORK PLAN OF THE MUSHROOM FARMING (MARCH TO NOVEMBER, 1996)

<div style="text-align: center;">MONTH</div> <hr/> <div style="text-align: center;">ACTIVITIES</div>	March	April	May	June	July	August	Sept	Oct.	Nov
1. Training of Mushroom farming	—								
2. First seeding Time	—								
3. First harvesting		—							
4. Training For Harvesting And Dry Mushrooms.		—							
5. Second Seeding Time				—					
6. Second harvesting					—				
7. Third Seeding Time							—		
8. Third harvesting								—	

(2) Budget For Mushroom Farming

(a)	Dry Straw 100 kg @ Rs. 2.00	=	Rs. 200.00	Villager
(b)	Culture Seed 20 bottles @ Rs. 22.00	=	Rs. 440.00	"
(c)	Polythen bags 100 PCs @ Rs. 1.00	=	Rs. 100.00	
(d)	Fuel Wood 40 kg	=	Rs. 100.00	Villager
(e)	Labour Cost 3 x @ Rs. 80.00	=	Rs. 240.00	"
(f)	Others	=	<u>Rs. 200.00</u>	
	Total	=	Rs 1280.00	

(3) Benefit

Fresh Mushroom 50 kg @ Rs. 80.00 = Rs. 4000.00

(4) Profit

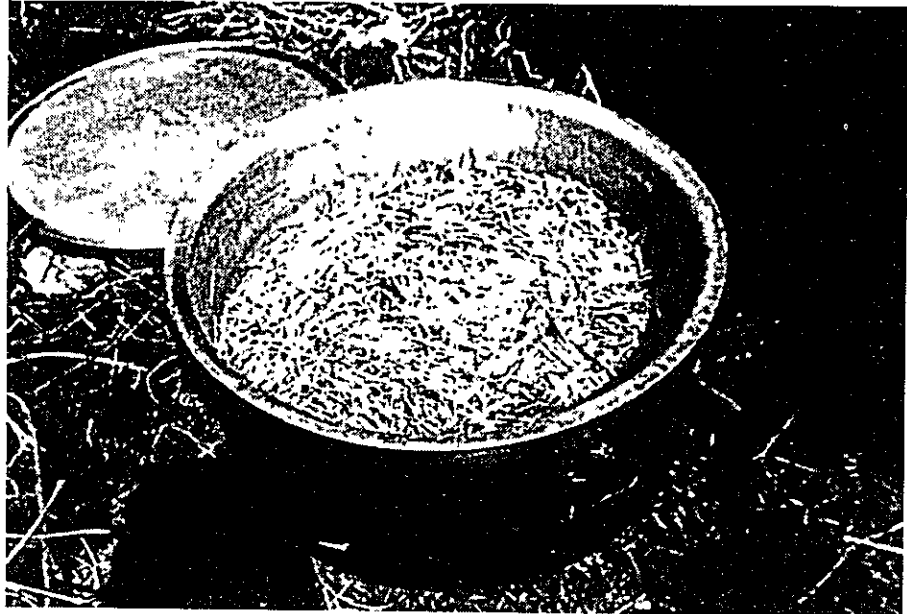
= Total Benefit - Total Cost
= 4000.00 - 1280.00
= 2720.00

Note : Dry straw and fuel wood will collected by local people

Annex 5. Methods of Mushroom Cultivation

[For 1 bottle of spawn-5 straw bolls]

- 1)Cut 5 kg dry straw in 2” size and dip in water for 2 hours.



- 2)Wash the wet straw with clean water and drain the water from the straw.



3) Steam the straw for 30 minutes
to disinfect the straw.



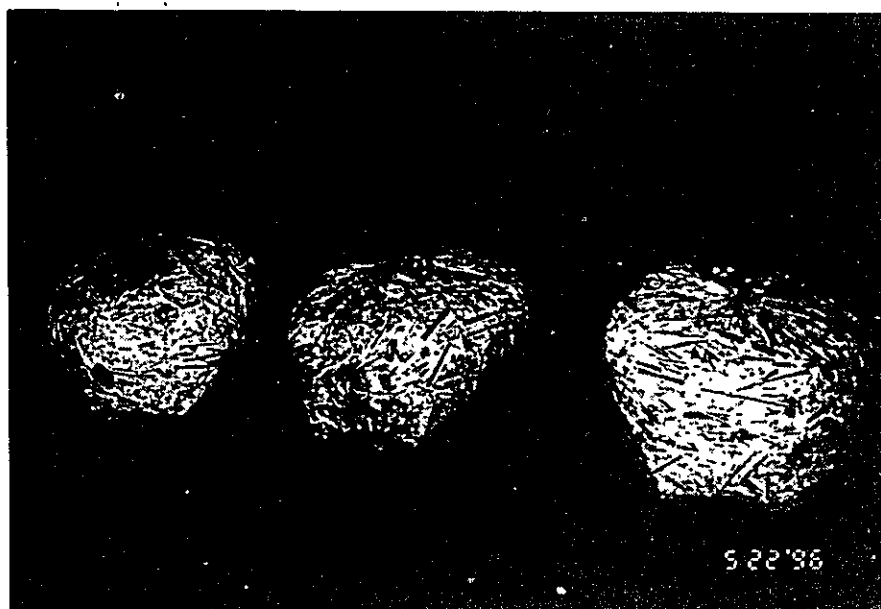
4) Lay the straw in plastic bag
(12"x18") for 2" and then
lay spawn on it
(One layer straw, then
spawn, again straw,
then spawn...).



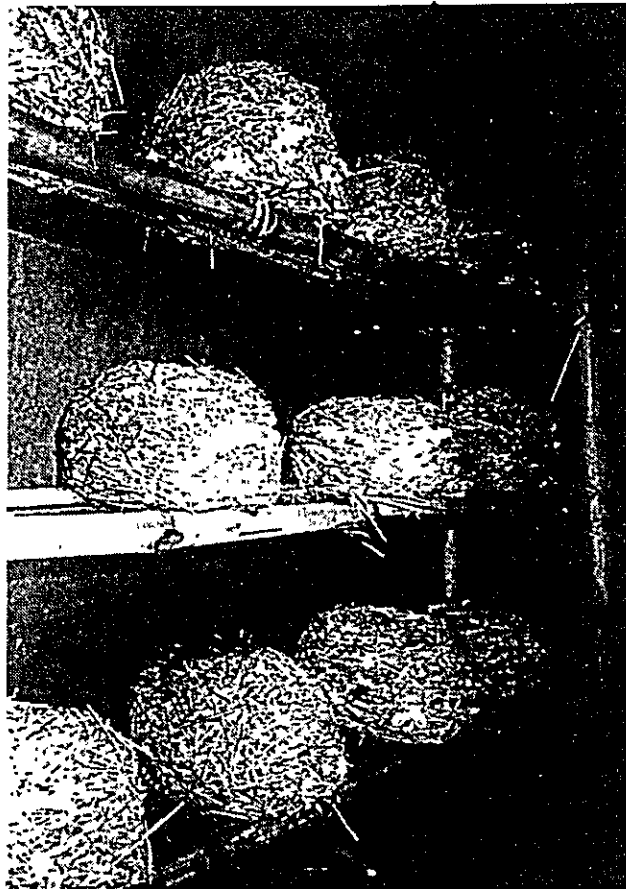
5)After bag is full, tie in mouth and make a hole in plastic bag at 10cm difference.



6)Put the bags in dark, clean and well ventilated place where people do not come often for 3 weeks.



7)After 3 weeks, white fungus are seen in the bag, tear the bag and place on a wooden sheet.



8)Water the straw boll 3-4 times a day. (straw should be always be wet.)





9)After 4 days small buds of mushroom are seen and after 3 days it can be harvested.

10)After 7-10 days after first harvest, second harvest can be done. In this way for commercial point of view it can be harvested for 3 times.

-From 1 bottle of spawn, 1.5-3 kg of mushroom are expected to grow.

-Bottle of spawn needs to be sowed within 7-10 days after arriving from Nepal

Agriculture Research Council

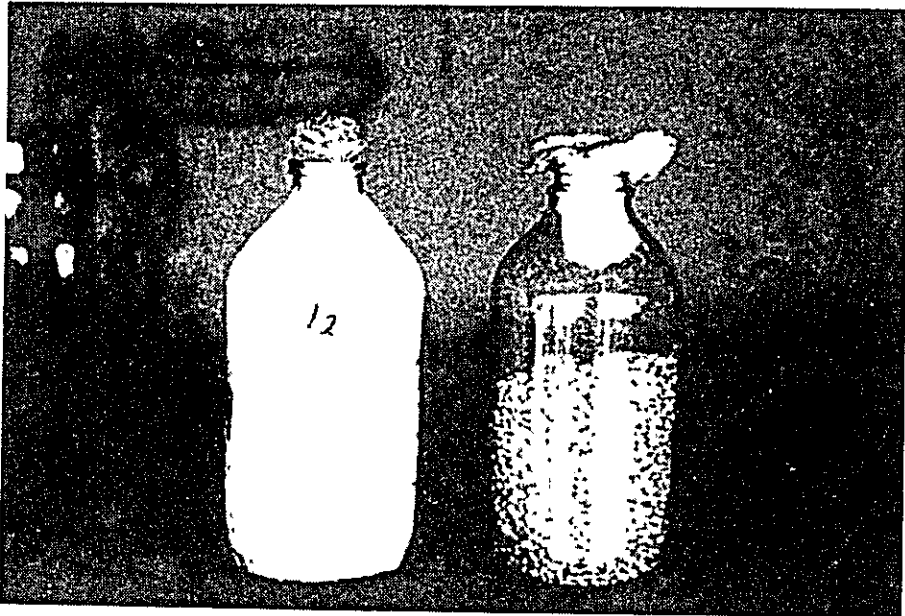
-Rate of mushroom is fixed at Rs. 100 per kilo by villagers

Annex 6. Photos

6-1 Photo of improves stove



6-2. Photo of spawn



Annex 7. Individual Data of Users' Group

No	Name of the Ward	Name	Sex	Age	Caste	Family members	Occupation	Education	Socio-economic status	Remarks
1.	Bishuna	A	F	50	Brahman	Husband and 6 children	Farmer	Literate	Medium	
2		B	F	28	Brahman	Husband and 5 children	Farmer	Literate	Medium	
3.		C	M	21	Brahman	8 members	Farmer	8 class pass	Low	Still cultivating
4.		D	M	20	Kami	14 members	Farmer	Under SLC	Low	
5	Dadagaun	E	F	22	Gurung	16 members	Farmer	7 class pass	Medium	Chairman of the Users' Group
6.		F*	M	44	Gurung	5 members	Farmer	Under SLC	Low	Former chairman of the Bijaya VDC.
7	Gairygaun	G*	F	42	Gurung	Husband and 6 children	Farmer	Illiterate	Medium	Still cultivating
8.		H	F	31	Gurung	Mother in-law, husband and 4 children	Farmer	Literate	medium	
9		I	M	28	Gurung	Mother, wife and 1 son	Teacher		Low	
10	Imdupaka	J*	M	32	Gurung	Wife, 1 brother and 4 children	Farmer	Under SLC	Medium	
11		K	M	26	Gurung	18 members	Farmer	SLC fail	Medium	
12		L	M	25	Brahman	9 members	Farmer	SLC fail	Medium	

Note * are leaders of the group0

Annex 8. Questionnaires on Mushroom Cultivation

- 1)What was your impression of mushroom cultivation?
- 2)What kind of problems occurred during cultivation?
- 3)How did you try to solve the problems?
- 4)What are the major causes for success or failure?
- 5)What was difficult in mushroom cultivation?
- 6)How did you like mushroom?
- 7)Is mushroom cultivation feasible in Mauja VDC? Can you keep on cultivating?
- 8)Can women do mushroom cultivation by themselves? If not what is the problem?
- 9)Who did the watering for mushroom? What was the role of each family members?
- 10)How many hours a day did it take for you to cultivate mushroom?
- 11)Do you think you can get income from mushroom cultivation? If yes, how many bottles do you need to cultivate?
- 12)Do you want to keep on cultivating mushroom?
- 13)What should be examined for the second year's operation?
- 14)What would you request HMG/JICA/JOCV to help in the planning and implementation in the second year's operation?
- 15)Is there anything you do not understand in mushroom cultivation?
- 16)Any other matters?

Annex 9. Responses of the Questions

1)What was your impression of mushroom cultivation?

- 12 Liked it very much.
- 1 Easy to cultivate.
- 2 Process of sowing is troublesome.
- 1 Hail does not damage it, so it is not risky as other crops.

2)What kind of problems occurred during cultivation?

- Did not have a space to cultivate mushroom.
- Did not have a straw to cultivate.
- There were not enough human resources.
- They could not judge whether mushroom culture was germinative or not.
- It was hard to water straw ball 3 times a day.
- Did not have a big container to steam the straw.
- Some harvested mushrooms were infected by vermin.
- Did not have a straw cutter.(straw was hard to cut with the knife)
- Mouse ate the mushroom.

3)How did you try to solve the problems?

- Asking to the M/P team.
- Discussing with other members.
- Sharing ideas with other members.
- By working together in group.

4)What are the major causes for success or failure?

(causes of success)-10

- Training was well prepared.

-Were able to get an advice from the M/P team frequently.

-Members worked hard.

(causes of failure)-2

-Did not water everyday.

-Mushrooms were infected because I cultivated under the bed.

5)What was difficult in mushroom cultivation?

-Collecting the clean dry straw.

-Steaming the straw with big container.

-Cutting straw.

-Finding a appropriate place to cultivate.

-Watering frequently.

6)How did you like mushroom?

-12 very delicious.

7)Is mushroom cultivation feasible in Mauja VDC? Can you keep on cultivating?

-12 Feasible.

- 8 out of 12 members answered that they can not cultivate this year anymore because they do not have a straw, but will cultivate next year again.

8)Can women do mushroom cultivation by themselves? If not what is the problem?

-4 yes

-8 no

-Women can not steam many straw at the same time since it is very heavy and hot.

9)Who did the watering for mushroom? What was the role of each family members?

-7 By her/him self.

-4 Leader of the group.

-1 Child.

-There were no role of family member, whenever person in charge could not work other family member took care of it.

10)How many hours a day did it take for you to cultivate mushroom?

-5--- 0 minute(Leader did for them)

-3---10 minutes

-2---30 minutes

-1---60 minutes

-1---90 minutes

11)Do you think you can get income from mushroom cultivation? If yes, how many bottles do you need to cultivate?

-12 yes, if only done in larger scale.

-4---3 bottles

3---4 bottles

1---6 bottles

1---7 bottles

3---10 bottles.

12)Do you want to keep on cultivating mushroom?

-12 yes.

13)What should be examined for the second year's operation?

-Place to cultivate.

-Collecting clean straw.

-Way to get mushroom cultures by themselves.

-Purchasing tools for cultivation.

14)What would you request HMG/JICA/JOCV to help in the planning and implementation in the second year's operation?

-Preparing a training.

-Financial support to purchase necessary tools.

-Bringing mushroom cultures from Kathmandu.

15)Is there anything you do not understand in mushroom cultivation?

-Appropriate way of watering straw ball.

-Methods to harvest more.

-Ways to distinguish whether spawns are germinative or not.

16)Any other matters?

-None.

Annex 10. Article on Mushroom Cultivation in Mauja

Nepali to English Translation of Article, published in the News Paper on 12 Jestha 2053 (25 May 1996) Written by Mr. Thakur Prasad Gurung.

5 June 1996

MUSHROOM CULTIVATION IN MAUJA

The farmers of Mauja VDC, Ward No. 7, 8 and 9 have started ``Kanney Mushroom Cultivation``.

This program started with the objective of income generation seems to be very-effective and important. The Mushroom Cultivation in Mauja VDC has been carried out with the assistance of HMG/JICA, JOCV through the Mauja Site Office.

After conducting a study tour on agriculture and income generation for the progressive farmers of Mauja VDC, Ward No. 3,5,7,8, and 9, to show them the model places in Nepal, they have started the mushroom cultivation. There were 25 participants in total consisting of both male and female. 20

When Ms. Hana Kobayashi, Mauja Site Office Incharge was enquired regarding this subject, she informed that this kind of ``Kannye Mushroom`` which is very proteinous and tasty can be eaten by the vegetarian people as a substitute for meat, within short period much profit can be obtained and after one time seed sowing harvesting can be done for 4 or 5 times.

It has been stated that the seed (spore) of mushroom costs Rs. :20/- per Kg. and ready (eatable) mushroom can be sold for Rs. 80-125/- per Kg. It has been informed that previously, the mushroom seed was brought from Central Agriculture Center, Khumaltar, Kathmanu, but from now onwards the private farmers will be contacted and the seeds made available to the local farmers.

At present this developed seed ``Kanney Mushrcom`` has been cultivated by the local farmers in their private land in the villages: Bisauna Bahun Gaon, Dada Gaon, and Gurung Gaon of Ward No.7, and Bijayapur Gairi Gaon along with Yamdi Pakha of Ward No. 8.

Mr. Nanda Bahadur Gurung, 73 years old local farmer, expresses that mushroom is more tastier than meat and adds that it is also easier to eat even in absence of his two teeth.
